

**A STUDY ON ACCESSIBILITY OF PHYSICALLY
CHALLENGED PEOPLE TO SOME SELECTED URBAN
SERVICES AND FACILITIES IN DHAKA**



ABUL BAKER MD. TOUHID



**DEPARTMENT OF URBAN AND REGIONAL PLANNING
BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, BUET
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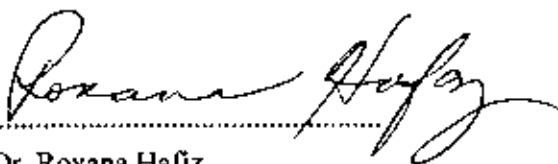
By
ABUL BAKER MD. TOUHID
ROLL NO. 040215018F

Thesis Approved as to the Style and Content by



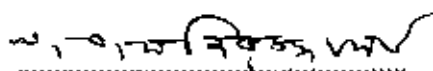
Ishrat Islam
Assistant Professor
Dept. of Urban and Regional Planning
BUET, Dhaka-1000

Chairman
(Supervisor)



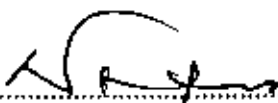
Dr. Roxana Hafiz
Professor & Head
Dept. of Urban and Regional Planning
BUET, Dhaka-1000

Member



Dr. K.M. Maniruzzaman
Professor
Dept. of Urban and Regional Planning
BUET, Dhaka-1000

Member



Dr. Nafeesur Rahman
Director, National Forum of Organizations Working with the Disabled
8/9, Block-A, Lalmatia, Dhaka-1207

Member
(External)

CANDIDATE'S DECLARATION

It is hereby declared that this thesis or any part of it has not been submitted elsewhere for the award of any degree or diploma.

Signature of the Candidate

Abul Baker Md. Touhid

Abul Baker Md. Touhid

Roll no. 040215018F

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ABSTRACT

Disability development in recent days is an integral part of neo-development paradigm all over the world. Integral part in the sense that, a country can not uplift its socio-economic conditions unless and until people from all strata of the society exercise the choice of better feeding, better economic opportunities and better social positions. According to the most recent statistics number of disabled people in Bangladesh is 5.82%. World Health Organization substantiated the figure 10% of the total population in developing countries. Whatever the rate is, they are many things, value judgment of physically challenged people is enormous. They can do many things as the fit people can do. So, it must be a reckless endeavor for overall development if protecting their rights, dignities and their welfare as well are not protected; can not be ensured with proper legal and administrative measures. This study can pave the way for doing so. It is an attempt to know the socio-economic & socio-cultural conditions of physically challenged people and their accessibility scenario to different urban services and facilities in Dhaka. The study area is Dhaka, because urban hazards are maximum here that can lead to establish accessible urban service-facilities in cities of Bangladesh.

Bangladesh has adopted National Disability Welfare Act in 1995. There are specifications for disability access mentioned in National Building Code -1993 and Dhaka City Building Construction Rules -2006. But lack of proper monitoring, implementation and lack of adequate impetus to protect disability rights Dhaka is far below from a 'disability friendly' city. The study, however, is willing to prelude the necessity of conscious and logical efforts to make urban services and facilities i.e. education, health, employment and built environment accessible to the physically challenged people in Dhaka.

The study explored that, physically challenged people are lagging behind day by day through unconscious but systematic way of discriminations. They possess poor literacy rate, they are not healthy, they have very limited job opportunities, they are socially and culturally isolated even in their family, all the built environment are somewhat totally inaccessible to them. The study has also investigated and evaluated the development activities taken by the public and private institutions working in Dhaka which are found discouraging and somewhat ineffective in nature & extent.

To make positive changes in socio-economic spheres of PWDs and to make accessible education, health, employment and built environment; the study has produced a 'policy-activity' matrix. The 'policy-activity' matrix comprised of long term, mid-term and short term activities. Responsible authorities to perform the job are also enlisted in the matrix.

ABBREVIATIONS & ACRONYMS

ADL	: Activities of Daily Life
BBM	: Bangladesh Blind Mission,
B.Ed.	: Bachelor in Education
BBS	: Bangladesh Bureau of Statistics
BCS	: Bangladesh Civil Service
BDWA	: Bangladesh Disability Welfare Act
BERDO	: Blind Education and Rehabilitation Development Organisation
BNBC	: Bangladesh National Building Code
BODA	: Bangladesh Organization of Disability Advancement
BPKS	: Bangladesh Protibondhi Kalyan Samity
BRTC	: Bangladesh Road Transport Corporation
BSSBG	: Baptist Sangha School for the Blind Girls
BUET	: Bangladesh University of Engineering and Technology
CAHD	: Community Approaches to Handicap in Development
CBR	: Community Based Rehabilitation
CDD	: Centre of Disability in Development
CNG	: Converted Natural Gas
CRP	: Centre for Rehabilitation of Paralysed
CSID	: Centre For Services and Information on Disability
DCBCR	: Dhaka City Building Construction Rules
DCC	: Dhaka City Corporation
DSS	: Department of Social Service
EMS	: Electrical and Mechanical Science
GIS	: Geographic Information System
GOB	: Government of Bangladesh
HKI	: Handicap International
HSBC	: Hong Kong Shanghai Bank Corporation
HSC	: Higher Secondary School Certificate
IBR	: Institution Based Rehabilitation
JAWS	: Job Access With Speech
MoEd	: Ministry of Education
MoSW	: Ministry of Social Welfare
NA	: Not Available/Not Answered
NCSE	: <i>National Center of Special Education</i>
NFOWD	: National Forum of Organizations Working with the Disabled
NGO	: Non-government Organization
PTI	: Primary Teachers Training Institutions
PWD	: People/Persons with Disabilities
SAHIC	: Society for Assistance to hearing Impaired Children
SARPV	: Social Assistance & Rehabilitation for the Physically Vulnerable
SPSS	: Statistical Package for Social Studies
SSC	: Secondary School Certificate
SVRS	: Sample Viral Registration System of Bangladesh
SWID-Bangladesh	: Society for the Welfare of the Intellectually Disabled-Bangladesh
UNDP	: United Nations Development Program
UNESCO	: United Nations Educational, Scientific and Cultural Organizations
UNESCAP	: United Nations Social and Economic Commission for Asia and Pacific
VHSS	: Voluntary Health Services Society
VIP	: Very Important Person
WC	: Wheel Chair
WEDC	: Water Engineering and Development Centre
WHO	: World Health Organization

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CHAPTER 1

Introduction

CHAPTER ONE

INTRODUCTION



1.1 Background

Bangladesh is now a 'medium least developed country' (UNDP, 2003) and stands 138th position among 177 countries in human development index (UNDP, 2004). She has done a significant change in her various human development indexes like primary education, maternal health, nutrition etc. in the last three decades since independence. Unfortunately, for 'physically challenged' (disabled) people the country has nothing to put across strappingly, though she has adopted a National Policy for Disabled Persons in November 1995. Particularly the accessibility of Physically Challenged People to various facilities is extremely poor compared to physically able people. The country also does not have reliable data about the number of people with disabilities though a significant section of population belongs to this group. Estimated figure of physically challenged people is 6,13,460 (BBS, 2001). The global figure for developing countries is 10% of the total population. (WHO, 2002). Considering the global estimate, the number of physically challenged people in Bangladesh would be about 14 million. However, physically challenged people have limited access to medical services. Access to education for them is also very poor. Educational institutions for physically challenged people are characterized by lack of trained teachers, unaffordable tuition fees and inaccessible building structure. Employment opportunity both in public and private sector is also extremely limited for the peoples with disabilities (Dulal, 2003). Transportation system in Bangladesh is fully inaccessible for them. There is no safety and security for them (Dulal, 2003). They can not avail the public buses and other public transport modes. In the shopping centers, they have no access at all. The condition is more critical and troublesome for the disabled people survive in a densely populated city like Dhaka. It is true that available facilities for general people are also limited in this city. Mainstreaming of these marginalized people has been discussed in various forums in recent years. Particularly, in urban areas their accessibility to various service-facilities i.e. education, medical, transportation, recreation etc. are the prior concern for effective mainstreaming of physically challenged people.

The constitution of Bangladesh has promised equal treatment and freedom of all her citizen. There are also some acts and rules for the welfare of physically challenged people. According to the Rules of Business, Department of Social Service (DSS) under the Ministry of Social Welfare is the responsible authority for their development. Along with DSS, a number of private and non-government organizations have been working for betterment of the people with disabilities. A good number of researches have also been carried out so far on their education, employment, medical treatment and mostly on their rehabilitation. As for example, Huq & Akter (2001) conducted a study on the educational requirement of children; Hossain, (2002) focused on the positive social response towards Disability; Mamun, (2000) did a study on the inclusive education of the physically challenged people; Rahman, (2004) emphasized on the facts and consequences of Disaster & Disability. But, issue of accessibility for physically challenged people did not receive due attention from the researchers, particularly from the urban planners and urban development experts. It is to be noted here that, the first attempt in this regard was accomplished by Handicap International and NFOWD in 2005. They conducted a study on accessibility scenario of PWDs throughout Bangladesh. However, this study was countrywide and not particularly dealt with the accessibility conditions of PWDs in Dhaka.

So the existing poor attention leads to the city development plan that does not reflect the need of the physically challenged people. Moreover, accessibility problem and the requirements of facilities vary according to the types of disabilities. So there are limitations in this regard. This study is intended to investigate the condition of the physically challenged people along with their socio-economic and cultural status, accessibility to various urban facilities and services in Dhaka city. It is to be noted here that, sight impaired, hearing impaired, speech impaired and wheel chair bound persons have been considered as physically challenged people in this study. On the other hand, the study referred built environment, public amenities, transport, education and health services as urban facilities and services. And at the end, attempt has been taken to articulate a set of recommendations that can promote/enhance accessibility to urban services and facilities.

1.2 Concept of Physically Challenged People and Accessibility

A varied degree of usual perception exists on disability and accessibility in the society. In the following paragraphs, attempt has been taken to clear the concept of disability, evolution of

the term - physically challenged people, types of disability, reasons of disability, and 'accessibility'.

1.2.1 Concept of Physically Challenged People

The concept of disability is widely and variedly argued by different school of thoughts. In medical science, to psychologists, to sociologists, to planners and architects disability is diversely defined. Dissimilarity is also found in using the term 'disability'. Particularly, to address the children with disability the professionals use different terminologies, which are basically dependent on acceptability of them and inherent nature of the terms. Earlier, disabled children were called 'moron' or 'imbecile' or 'idiot' (Begum, 2003). But these terms were seemed objectionable not only by the professionals but also they ignored the potential of the children with disabilities. At that time, however, some people addressed them as 'exceptional child'. This was because, they are not like the normal child; their physical, mental and other characteristics are not same as the fit children; their attitudes, their responses towards something are different from others. According to some people, the term 'exceptional child' could not also express the appropriate and positive notions of the children with disabilities. It is argued that 'exceptional child' connotes somewhat exclusion that imposed upon them. At some time, people addressed them as 'special child'. They are somewhat above or below the normal standard of fit children. 'Special child' is relatively and friendlier notion to the children with disabilities and it is being used widely at present day. Similar thing is noted in case of addressing the people with disabilities. Primarily, they were simply called 'disabled' people. Disabled, in general, means total inability to do something which is not correct. They can do many things as the normal people can. The nature and extent of work may or may not vary. Strong reaction among representatives of organizations of persons with disabilities and professionals in the field of disability against the terminology 'disabled' persists till 1970s. The activists were moving forward to change the term.

People on the basis of type of disabilities are sometimes called – blind, deaf and dumb, crippled etc. But these are very much repulsive in nature and the dignity of the people with disabilities is dauntingly ignored. World Health Organization (WHO, 1980) defined some disability related terminologies i.e. 'impairment', 'disability' and 'handicap'. According to WHO **impairment** is *'any loss or abnormality of psychological, physiological, or anatomical structure or function'*. WHO defined **disability** as *'any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered*

normal for a human being'. On the other hand, **handicap** is '*a disadvantage for a given individual, resulting from an impairment or disability, that, limits or prevents the fulfillment of a role that is normal, depending on age, sex, social and cultural factors, for that individual*'. So there are clear distinctions among the terms.

It must be noticed here that, the term "handicap", is considered too medical and too centered on the individual, and may not adequately clarify the interaction between societal conditions or expectations and the abilities of the individual.

In such a context, in contemporary literature, research and development program they are called as 'people with sight/visual impairment', 'people with hearing/speech impairment', 'people with physical impairments' and in combine 'people/persons with disabilities'. Moreover, there are direct suggestions of UN to avoid the derogatory terms while addressing disability – 'instead of the disabled, the handicapped, the crippled use persons or people with disabilities' (UN-ESCAP, 1995). Because, these terminologies do not ignore them rather complements the potential of the people with disabilities.

Disability is not something one has, it is something that happens when one group of people create barriers in designing the world only for their style of living (Sharma et.al., 2003). Twenty years ago disability was perceived as a 'medical' problem. During 1980s and 1990s a strengthening 'social' interpretation was placed on the meaning of disability and emphasis was given to the disabling effect of non-accessible environments and the need to remove barriers. At present day, disability is a human rights concern (Hossain, 2002). However, Bangladesh Bureau of Statistics (BBS, 1991) defined disabled person as -

'a person who was unable to work or perform his/her personal or social activities in full or partially due to loss of any limb, organ or mental faculty or for other reasons'.

Bangladesh Disability Welfare Act 2001 (Annexure II) has also defined disability in its own way. Disability refers to any person who,

- (a) *is physically crippled either congenitally or as a result of disease or being a victim of accident, or due to improper or maltreatment or for any other reasons become physically incapacitated or mentally imbalanced, and*
- (b) *as a result of such crippling conditions or mental impairment-*
 - i. *has become incapacitated, either partially or fully; and*
 - ii. *is unable to lead a normal life.*

In this research, however, people/persons with disabilities have been denoted as 'physically challenged people'. The intension is to avoid the derogatory sense of using the word 'disabled' and 'disabilities' or handicapped. The essence of the terminology is that, their disability or impairment in certain aspects has made them challenged to avail or access something which are accessed by the fit people normally.

1.2.2 Operational Definitions of Physically Challenged People and Their Types

Physically challenged people: by the term 'physically challenged people', this research, refers those persons who are unable to access the services and facilities as an able-bodied man can, not only due to their *physical deficiencies*, but also *for the deficiencies resulting from hearing & speech impairments and sight impairments*. Intellectual disability (mental retardation) and persons with multiple disabilities have been excluded here. This research has used both the term – 'people/persons with disabilities' and 'physically challenged people' synonymously.

Visual impaired; means the person who is to use white stick ideally to perform his/her daily activities. S/he may or may not use the white stick.

Hearing impairment; refers loss of hearing capacity in such extent that, fit people can not access him/her. One who use hearing aid at maximum time is also included in the category.

Speech impairment; means a person who can not speak and can not utter or pronounce meaningful vocabulary sounds so that one can understand him/her. S/he is to use sign languages to communicate with others.

Physically handicapped, refers a person who needs to use wheel chair for accessing daily necessities. The condition may be the result of losing any limbs or physical deformity and abnormality. One who has permanently lost physical equilibrium owing to neuro-disequilibria, and old age is also included in the category.

It is to be noted here that, the definitions are very much similar or their similarity is justified with the definitions and types mentioned in the Bangladesh Disability Welfare act, 2001.

1.2.3 Types of Disability

Disability has been categorized not only on the basis of limbs/organs affected, but also various development organizations have their own criteria in categorizing disability. World Health Organization (WHO, 2002) has identified the following types of disability based on nature and prevalence of disability through out the world-

- a. Mobility impairment
- b. Hearing impairment
- c. Deaf
- d. Sight impairment (Blind)
- e. Intellectual disability (Mental handicap)
- f. Learning difficulties (Dyslexia)
- g. Disabilities due to chronic diseases (Epilepsy, diabetes)
- h. Disabilities due to mental illness (Schizophrenia) and
- i. Person with multiple disabilities.

Bangladesh Disability Welfare Act 2003, the first legal effort for the welfare of PWDs, has defined six types of disabilities in the country (See Annexure II). The types are –

- i. Visual impaired
- ii. Physically handicapped
- iii. Hearing impairment
- iv. Speech impairment
- v. Mental disability &
- vi. Multiple disabilities

It is found in general that, a person of hearing impairment is also affected by speech deficiencies. Sometimes, they are called people having hearing and speech impairments. Moreover, leprosy, goiter, worthless, memory loss etc. are also included in the definition of disability. Sample Vital Registration System of BBS has also categorized disability while addressing prevalence of disability in 2002. As the research is primarily dependent on the statistics of BBS, it has considered BBS standard as the standard of the study with slightly different way. The functional types of disability or disabled people accepted in the study are shown below-

Table 1.1 Disability Type and Its Functional Category

<i>Disability type addressed by BBS</i>	<i>Functional category for the study</i>
Blind	Sight impairments
Night blind	
Deaf/dumb	Hearing/speech impairment
Mental	Intellectual disability
Memory impairments	
Cripple	Physically handicapped
Goiter	Others (including multiple disability)
Leprosy (white skin)	
Leprosy	
Worthless	
Others	

Source: Prepared by the researcher, 2007

1.2.4 Reasons of Disability

Causes of disabilities in the country vary from unexpected accidents to various types of diseases occurred from malnutrition, illness etc. and consequences generated from poverty. According to Bangladesh Bureau of Statistics –

“...congenital, from unknown causes, caused by wrong treatment or maltreatment, from accidents or disease, resulting from malnutrition or poverty and compounded by a lack of awareness about health and causes of disability” (BBS, 2002)

Violence, road accident and natural calamity are pushing up the number of disabled people in the country. Generally; it is found that, accident causes higher extent of physical disability in the country. About 250,000 people irrespective of age, socio-economic status, and gender become disabled every year in the country due to environmental pollution, terrorism, domestic violence and road accidents (Hossain, 2002).

Voluntary Health Services Society (VHSS, 2000), a research organization working in the field of disability has explored that illness/disease causes about 44% disability around the country, while accidents are responsible for 13% of the total.

Table 1.2 Causes of Disabilities in 1994-1999 Estimated by VHSS

<i>Causes of disabilities</i>	<i>Rate (%)</i>
Accidents	13
Illness/Disease	44
By birth	20
Ignorance, Negligence, Malnutrition	9
Unknown	14
<i>Total</i>	<i>100</i>

Source: VHSS, 2000

Bangladesh Protibondhee Kalyan Samity (BPKS) conducted a baseline survey on disability in two sample villages in the country containing a total population of 4987 (Taher, 2001). The study shows that 7.18% of the total population is disabled.

According to the study the causes for disablement are-

- extreme poverty
- ignorance
- malnutrition
- poor hygiene
- neglect
- local usage of prejudice
- lack of facilities for general and early treatment
- lack of knowledge of capabilities of disabled persons on the part of the public
- accidents (industry and road)
- violence and
- population explosion.

In Bangladesh, malnutrition disables thousands of people a year. The six fatal diseases i.e. poliomyelitis, measles, tetanus, whooping cough, diphtheria and tuberculosis are root causes of many disablements in the country. It is also reported that, due to Vitamin A deficiency 30 to 35 thousands of children are becoming blind every year (Taher, 2001).

Disasters; particularly cyclones, tornados and Nor'westers also originate enormous physical injuries. Disasters also set psychological trauma amongst the severely affected people. A joint study conducted by Bangladesh Institute of Development Studies (BIDS) and Social Assistance & Rehabilitation for the Physically Vulnerable (SARPV) explored that, 135 people out of the 1,516 people who had suffered serious injuries during devastating tornado in Satura of Manikganj district in 1991 people became permanently disabled (Rahman, 2004). Another study done by SARPV revealed that a total of 799 people became disabled directly as a consequence of devastating cyclone in 1991 only in Chakaria, Cox's Bazar (Rahman, 2004).

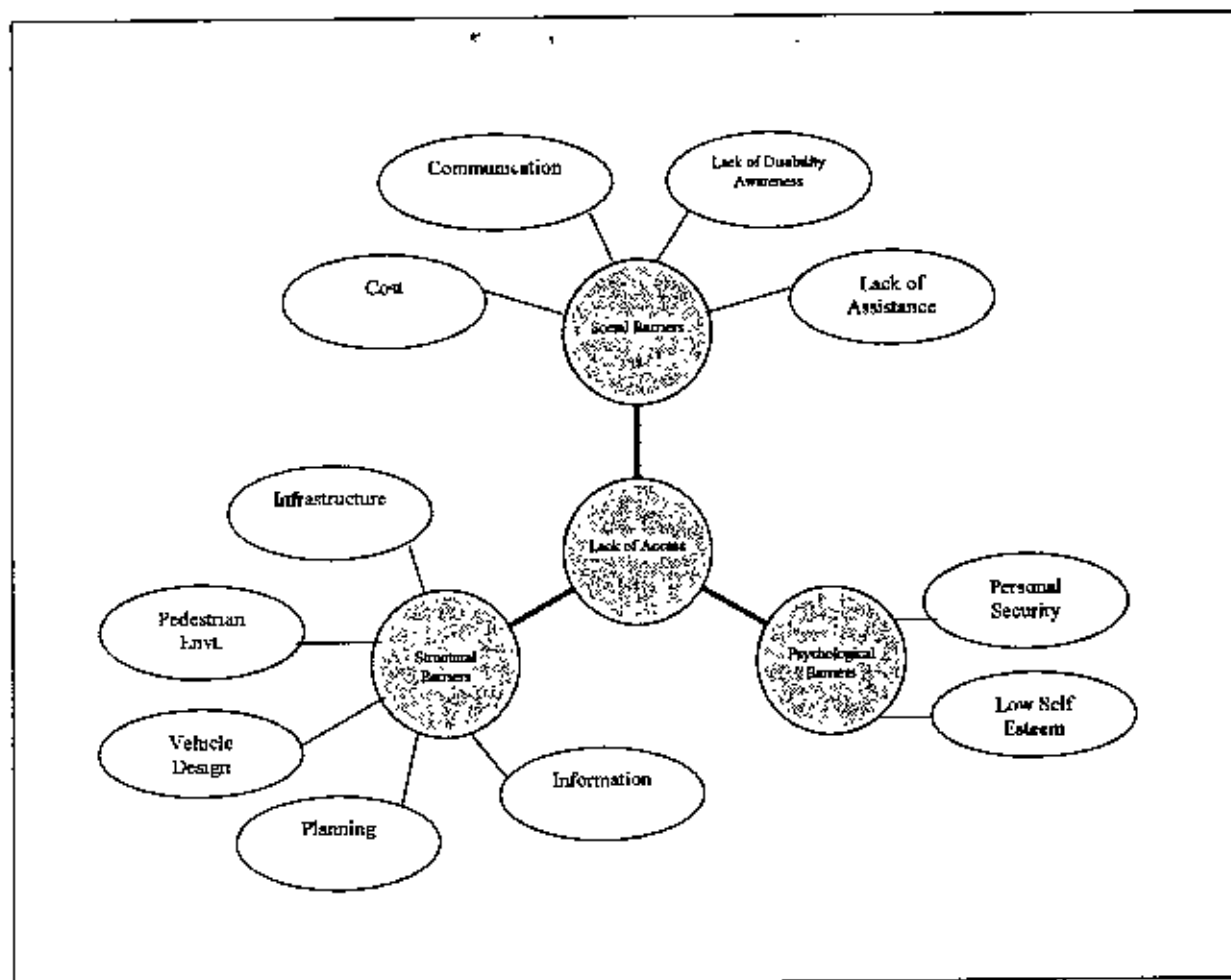
1.2.5 Concept of Accessibility

There are some theoretical terms which must be understood while talking about accessibility. 'Access', 'accessible' and 'accessibility' are those important terminologies. Access, in general and theoretically refers 'a means of approaching or entering a place'. In another

words, it refers 'the opportunity or right to use something or approach any one'. It means, if anyone wants to access something, s/he wants to avail that. If it is a school, access refers getting admission there by dint of intellectual and financial ability. Access to a park means provision to enjoy all facilities available in the park. In case of employment, access denotes the right to use the opportunity and to prove the worth.

'Accessible' on the other hand, is that which 'can be reached or used' – which can be accessed. It also means 'easy to use or understand'. So, accessible implies the idea of getting or reaching something/someone easily or through following certain rules and regulations. And in denoting 'accessibility', it can be said that, it is such a condition in which person is able or unable to access or avail certain services or facilities. For persons with disabilities, access or accessible means that they can, without assistance, approach, pass to and from, and make use of an area and its facilities without undue difficulties (ESCAP, 1995). There are three types of barriers for which all types of services and facilities are inaccessible to the disabled people- social, psychological and physical (Venter et.al., 2002) [See Figure, 1.1].

Some people classified accessibility barriers as physical and non-physical. Social and psychological barriers are non-physical barriers. Cost (of any service or facility), communication, disability awareness and lack of assistance (from others) belong to the social barriers. These are created socially and are viewed in regular life and activities. Psychological barriers include personal security and low self esteem. Both of these are created due to the non-friendly surroundings and negative attitude towards disability prevailed in the society. There might be some biological reasons of low self esteem of persons with disabilities all around. Department of International Development UK has developed a distinctive chart of accessibility barriers which includes three fundamental barriers i.e. social, structural and psychological.



Source: Venter et.al., 2002

Figure 1.1 Barriers to Accessibility

Physical barriers constitute the infrastructure design, pedestrian environment, vehicle design, planning and lack of information. These barriers are found as key factors that shatter leading normal life. The movements of disabled and old people can often be restricted by high curbs that flank their streets (Sen, 2004).

‘Ensuring Accessibility’ is the 5th Standard Rule of the Equalization of Opportunities for Persons with Disabilities introduced in 1993. It has addressed two forms of accessibility –

- a. access to the physical environment
- b. access to the information and communication

In developing countries, for person with disabilities (PWDs), physical barriers have been one of the several but crucial factors leading to their exclusion and segregation from society. Physically disabled people face numerous difficulties in accessing both the natural-rural environment and the built environment (Jones, Parker and Reed, 2002)

1.2.6 Operational Definition of Accessibility

By accessibility, this research refers *the condition that make a person able and unable as well, to get access a service and facility which s/he deserves*. In another words, it can be said that, many of our physical designs of services and facilities are not convenient for the physically challenged people to get access into. Similarly, legal provisions, development policies etc. can make someone detached or segregated from achieving or making enabled to get access into services and facilities both in urban and rural areas. Such type of accessibility can be of various forms i.e. access to education, access to employment opportunity, access to transport & roads, access to buildings and equipments, access to recreation etc. This research has concentrated on accessibility of physically challenged people into some selected urban services and facilities which include education, transport, recreation and commercial facilities in both physical and non-physical perspectives.

1.3 Study Objectives

The general objective of the study is to know the accessibility conditions of physically challenged people to some selected urban services and facilities in Dhaka. Specific objectives of the study are -

- a. To know the socio-cultural and socio-economic status of physically challenged people in Dhaka.
- b. To study the accessibility of physically challenged people to some selected urban services and facilities.
- c. To provide a set of planning & policy recommendations to improve the status and accessibility of physically challenged people.

1.4 Rationale of the Study

No doubt, disabled or physically challenged people were not a development concern for the country in the past decades. Their participation is prevented not only by their individual limitation, but also by physical barriers in the surrounding environment. A complex set of cultural, social and economic rules (UN-ESCAP, 1995) and 'societal barriers' (WHO, 2002) have also been playing an important role in this regard. Development initiatives for welfare of the People with Disabilities (PWDs) were also a far reaching concern. Bnt, in recent years development professionals and planners are thinking seriously about them – their welfare, their participation and their inclusion as well. Now the policy makers realized that, disability is not a welfare issue and thus it should be considered as a part of the development agenda

(Maharishi, 2000). This has been exerted in the country since the introduction of National Disability Welfare Act in 1995. In fact, the act is the result of continuous movement of disability development workers, civil society and of course the physically challenged people.

Globally, the aims and approach of planning are changing over time (Aslaksen et.al, 2002). Early planning, which was mainly town planning focused on – defense, fire safety and sanitary considerations (hygiene-health). During last 50-60 years planning was very much concentrated on - economic growth, employment and equalizations of living conditions. And in last 10-20 years, planning has widened its activities specially relating to - environment, women, sustainability, children and youth, elderly people and people with disabilities. Considering the present context of world, planners and policy makers of Bangladesh also need to address the disability issue while planning for physical environment and social wellbeing.

Disability was perceived as a 'medical' problem at past. But in recent years, a strengthening 'social' interpretation has been placed on the meaning of disability and emphasis has been given to the disabling effect of non-accessible environments. Removing barriers for them is also a crucial issue at present day. Now, accessibility for disabled is a human rights concern. So, restriction of access to hospitals, education institutes and work places of any kind is a violation of human rights. Unfortunately, disabled people in the country are still experiencing inaccessibility to buildings, transport, markets, offices and businesses, roads and walkways, parks and stadiums (CRP, 2002). This situation needs to be changed. Increasing contact and integration between the disabled and normal people in the society can help develop a disabled-friendly and enabling environment for those marginalized people of Bangladesh.

It is found that the issue of disability has received significant place only in the disciplines of medicine and psychology but scant consideration by society, and specifically by the general academic circle. Moreover, in contrast to the global planning considerations, Bangladesh has hardly any example of academic research in this regard.

Study conducted by Hossain (2002) shows that, about 250,000 people irrespective of age, socio-economic status, and gender become disabled every year in the country due to environmental pollution, terrorism, and domestic violence and road accidents. About 70% of the disabled people of the country need rehabilitation services, including medical

rehabilitation and social integration, 92% of the disabled children of age group between 6 and 14 do not have access to educational facilities due to lack of financial and technical support. Age and education levels do not make any difference to the attitudes of the people towards disabled people. So to achieve a better and livable condition for the PWDs, study relating to their socio-economic condition, their physical accessibility to service-facilities is urgent. This can be helpful showing some paths for their welfare and total integration of them in development. The issue of integration can not be understood separately in the context of the extent of disability. Rather a comprehensive analysis including from physical, social, psychological factors such as housing, employment, finance, built environment, transport, recreation etc. are essential (Haque, 2002).

In such a backdrop, this research was an attempt to explore accessibility condition of the PWDs to the urban facilities in the capital city Dhaka. To know the socio-economic and cultural conditions the PWDs was also another important objective of the study. Along with these, the study formulated a set of planning & policy recommendations to improve the status and accessibility of physically challenged people in the country.

1.5 Methodology of the Study

An effective and useful research always requires a series of systematic steps to be followed. Each and every step of the series is essential and needs to be meticulously designed and objective oriented. Primarily an area was selected to conduct the study. Then a work plan was set out including the whole process to carry out the study. Methodology, followed in the study, is discussed below –

1.5.1 Selection of Study Area

Dhaka City Corporation (DCC) was the study area of the research. As the capital of Bangladesh, Dhaka enjoys the most urban services and facilities both in terms of quality and quantity. The highest number of urban population also lives in Dhaka.

A recent study shows that, disability rate in urban areas is lower than the rural areas of the country (SVRS, 2002). But accessibility condition of urban services-facilities for persons with disabilities can significantly be revealed where there are reasonable manifestations of stakeholders and dearth of services even for the fit people.

DCC has the population amounting 53,78,023 in 2001 (BBS, 2001). If the crude disability rate for urban area (4.21 per 1000) as estimated by BBS is taken into account, then number of PWDs in DCC stands 22,641. And if 10% disability prevalence rate as estimated by WHO is considered, then the number raises to 53,780. On the other hand, DCC is characterized by the maximum level of urban services and facilities i.e. education, health, transport, public amenities, employment etc. In such a position, Dhaka would explore the best scenario of accessibility of physically challenged people to urban services and facilities. It is to be noted here also that disability statistics and documents in the country is not well-structured and disability development movement is rampant in the capital both from the government and non-government organizations. All these influenced to select Dhaka as the study area.

1.5.2 Data Collection

A set of questions were devised to measure supplies of level of selected service-facilities for physically challenged people in Dhaka. Information, based on the questionnaire, was collected from the secondary sources (C Type – Annexure VIC).

On the other hand, supplies of level of selected urban services and facilities for physically challenged people were collected directly either through interviewing of people with disabilities and or check-listing GO/NGO initiatives for them. Researchers, thinkers and experts on this field were also consulted while conducting the study. All the sources belong to 'primary' data source.

Primary data was collected with the help of 'questionnaires'. Prior to preparing questionnaire some sort of information screening was done regarding prevalence of disability, available service-facilities for them, accessibility scenario etc. in Dhaka. A reconnaissance survey was also conducted on the socio-economic and socio-cultural condition of physically challenged people and disability development movement in Dhaka. Then one set of questionnaire and one set of checklist were prepared which are –

- (i) Questionnaire for collecting information on socio-economic and socio-cultural conditions of PWDs – A Type (Annexure VI-A) and
- (ii) Checklist to assess accessibility to built environment – B Type (Annexure VI-B)

In addition to that, case studies of few physically challenged persons have been conducted. Planners, architects, professionals working for disability development, NGO workers and development thinkers' were consulted regarding the issue in this category.

Table 1.3 Data Collection Chart

<i>Objective</i>	<i>Procedure/Method</i>	<i>Source</i>	<i>Sample Size</i>	<i>Identity</i>
Objective-1 (Socio-economic and socio-cultural)	• Questionnaire (A- Type)	Primary	150	Person
	• Case Studies		3	
	• Questionnaire (C- Type)	Secondary	72	Institution
Objective-2 (Urban services and facilities)	• Questionnaire (A- Type)	Primary	150	Person
	• Checklist (B- Type)		70	Built Structure

Sample Selection: Sample Vital Registration Survey of Bangladesh Bureau of Statistics (SVRS, 2002) estimated crude disability rate per 1000 population in the country 5.86; while the global estimate by World Health Organization (WHO, 2002) for developing countries, is about 10% of the total population. BBS estimated 4.21 per 1000 crude disability rate in urban represented areas of the country. In fact, there is no accurate data of disability cases in Dhaka. That is why; the national standard data has been taken as the benchmark to measure the number of physically challenged people in Dhaka. The number of population in the study area i.e. Dhaka City Corporation (DCC) is 53,78,023 (BBS, 2001). Disability prevalence in urban areas of Bangladesh is 4.21 per 1000 population. According to the national statistics (BBS, 2002), the percentage of physically challenged people is 14.81%, 23.19%, 19.62%, 24.00% and 18.38% for sight impairments, hearing/speech impairment, intellectual disability, physically handicapped and others respectively. These shares of each disable category can be taken as the point of reference while calculating the number of physically challenged people in Dhaka. According to aforesaid ratio (4.21 per 1000 population) the number of PWDs in Dhaka was found 22,642. Among them, only 150 samples have been surveyed all around DCC using Questionnaire-A Type which stands only 0.66% of the total population (Detail statistics and sample selection for DCC has been attached in Annexure-I).

In case of assessing the accessibility to built environment samples were selected in somewhat indicative method. Checklist was conducted on 12 distinctive urban service and facilities i.e. shopping complexes, government buildings, private buildings, educational institutions, health institutions, parks, play grounds, theaters, bus terminal, railway station, piers & Jetties and streets & footpaths. About 70 items were investigated to see the accessibility condition.

Table: 1.4 Samples Surveyed Under the Research

<i>Item</i>		<i>Sample Size</i>
Questionnaire Type A	Persons with disability	150
	Physically handicapped	49
	Sight impaired	53
	Speech impaired	37
	Hearing impaired	11
Checklist	Built structures	70
	Shopping Complexes	10
	Government Buildings	5
	Private Buildings	8
	Educational Institutions	10
	Health Institutions	9
	Parks	7
	Play Grounds	6
	Theaters	6
	Bus Terminal	3
	Railway Station	1
	Piers and Jetties	1
	Streets and Footpaths	4

1.5.3 Data Interpretation and Analysis

All the collected data and information were analyzed, focusing on accessibility of physically challenged people to selected urban service-facilities. On the basis of the analysis a set of policy recommendations were developed. Note that, in data interpretation and analysis available and necessary tools and techniques like Statistical Package for Social Studies (SPSS), Geographic Information System (GIS), and Word Processing etc. were used. Then encompassing all the facts and findings of the study the final report was produced subject to prior reformation, edition and proofing.

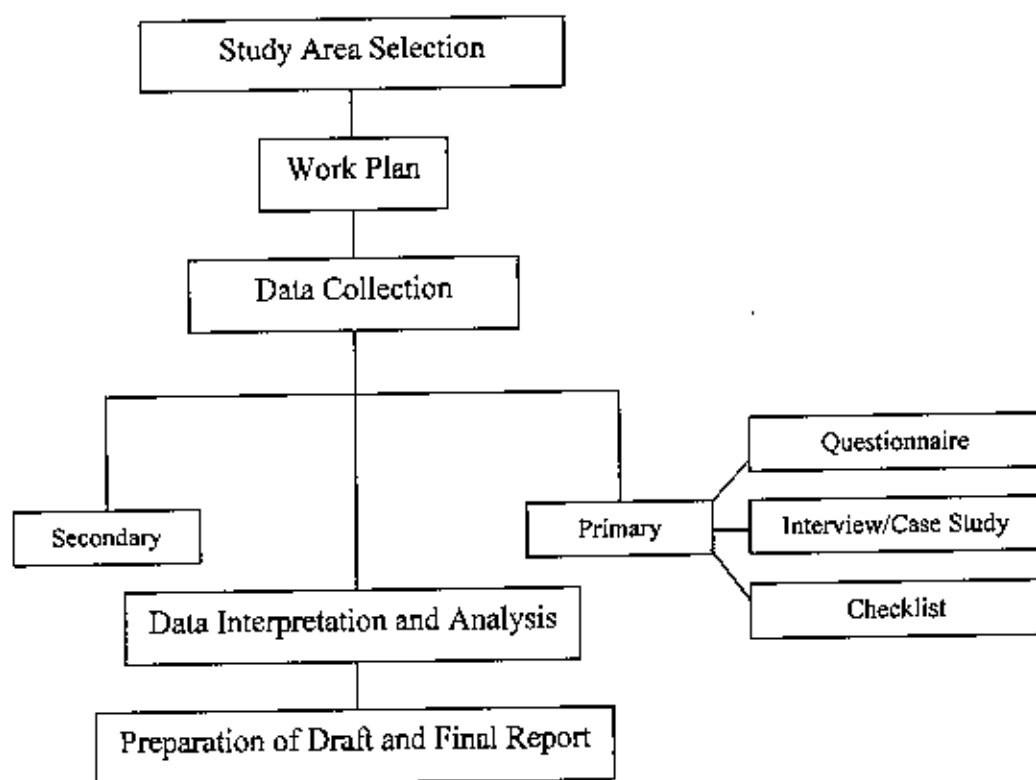


Figure 1.2 Flow Chart of Methodology

1.6 Scope of the Study

The study described the accessibility condition of physically challenged people to selected urban services and facilities in Dhaka. By the term 'physically challenged people' the study meant sight impaired, hearing impaired, speech impaired and wheel chair bound persons. It has excluded the intellectually disabled person for difficulty of communication. On the other hand, the selected urban services can be broadly categorized into social facilities and physical environment. They were-

Physical

- Built environment (shopping complexes, public buildings, private buildings, educational institutions and health institutions);
- Public amenities (parks, play grounds and theaters);
- Transport/circulation (bus stops, railway stations and piers & jetties)

Social facilities

- Education
- Health facilities and
- Employment opportunity.

The study has also explored the social position of physically challenged people. By the term 'social position' the study means social acceptability of PWDs, people's attitude towards them etc.

The study has discussed about the status of physically challenged people in the country at the beginning. Evolution of the term 'physically challenged people' has also been discussed. The study also analyzed types, nature, extent and causes of disability in the country. This study focused on the concept of accessibility both at home and abroad.

Policies and programs taken by the Government for improving the situation of physically challenged people were explored in the study. There are several development initiatives from the NGOs to improve the condition of people with disabilities in the country. A good number of NGOs are working on disability issue specifically in Dhaka. These have also been discussed in the research.

The study also highlighted some legal efforts and various development projects taken all over the world particularly, in the cities for ensuring effective accessibility of physically challenged people.

The most important thing is that, the contents of the study are poles apart from available research contents and outcomes. There are works concentrating on social aspects and economic affairs of the PWDs done through out the country. But the study has only dealt with capital city Dhaka. In case of accessibility, the study is also unique; because, no study found that dealt with the subject matter conducted only on Dhaka. Another important thing is that, the research has attempted to explore the deficit of some services against their practical requirements. And based on this deficit analysis a set of policy recommendations (policy-activity matrix) has been developed to improve the overall socio-economic and accessibility conditions for the persons with disabilities in Dhaka.

1.7 Limitations of the Study

The study is not free from limitations. These limitations were somewhat beyond researcher's capability and also due to the research methodology followed in the research.

- a. While conducting study the researcher faced problem in collecting authentic information. There are hardly any sources of authentic information of physically challenged people living in Dhaka city. Census report of 2001 from Bangladesh Bureau of Statistics (BBS) has not been published yet; the researcher had to depend on the secondary sources. But these secondary sources also based on assumptions and in some cases on projections. However, in the study a general projection system has been used to know the number of physically challenged people in Dhaka city.
- b. While getting information on socio-economic, socio-cultural and accessibility through questionnaire survey, it was almost impossible to reach the physically challenged people who are not active outside. Survey included those who are active in the society in various sectors like education, occupation. Moreover, they are very much aware about their rights and dignities. It can not be said that, their answers were not fabricated. Beggars and street children are also included in the sample. That is why, the study result, seems to be somewhat biased though not illogical. Not illogical in the sense that, the study intended to explore such kind of accessibility scenario and hence policy recommendation so that policy makers can not but to address the possible actions for disability development. It was believed in the study that, the privileged portion of physically challenged people can furnish their requirements in logical manner and hence policy recommendations developed in the study can be effective.
- c. There were some communicative problems especially in the case of hearing and speech impairments while conducting questionnaire survey and case study. Here, the researcher had to take help from the interpreter.

1.8 Organization of the Study

The whole research content has been organized in six thematic chapters. Each chapter was concentrated on a specific issue and holds necessary literature and analysis. *Chapter One* introduced the research to the reader through a thorough discussion on background of the study, concepts of physically challenged people & accessibility and study objectives. The chapter describes the types and reasons of disability, concept of accessibility, rationale and

methodology of the study. In addition, the chapter focused on the selection of study area, data collection, data interpretation and analysis & scope and limitation of the study.

Chapter Two presents the picture of global scenario of accessibility condition to physical and non-physical environment. Accessibility condition, accessibility standard, accessibility law of Europe, Africa, Asia are the discussion matter of this chapter.

Chapter Three exclusively discussed on the physically challenged people in Bangladesh; their demographic features, their accessibility conditions to urban services and facilities. At the same time, relevant policies, laws and acts of the government has been focused in this chapter. The activities and performances of public & private institutions involved for the welfare of physically challenged people in Bangladesh has also been discussed in this chapter.

Chapter Four demonstrated the socio-economic and socio-cultural status of physically challenged people in the study area. Demographic features of surveyed PWDs, their economic status (Occupation, Income and Expenditure) and cultural and social accessibility has been given focus while investigated.

Chapter Five exemplified the accessibility condition of physically challenged people to selected urban services and facilities in Dhaka. The discussion was accomplished under the heading education, health, employment opportunity and built environment. The chapter is basically based on the study findings investigated from questionnaire, interview and checklist method. One of the important features of this chapter is 'demand-supply analysis' of urban service and facilities for PWDs.

Chapter Six is the concluding chapter. It focused on evaluation of the existing disability development program in Bangladesh and a set of policy recommendations has been given in this chapter to improve the situation of accessibility for physically challenged people. The policy recommendations were supplemented by a 'policy-activity' matrix.

CHAPTER 2

Accessibility of Physically Challenged People: A Global View

CHAPTER TWO

ACCESSIBILITY OF PHYSICALLY CHALLENGED PEOPLE: A GLOBAL VIEW

2.1 Introduction

In the previous chapter discussion was concentrated on the study background, objectives, methodologies and subsequently the theoretical aspects of disability and accessibility. Now it is important to look into, what is happening all around the world mostly relating to accessibility in recent days. Accessibility scenario of physically challenged people in the world is not up to the standard in general. Particularly, in the least developed and developing countries, where basic needs are yet to be fulfilled, the situation is even worse. On the other hand, planning authorities in the cities of developed countries are very much concerned not only about the accessibility of disabled people but also aware of ensuring equal rights and opportunities to disabled people. They have sufficient laws and regulations for protecting the rights of physically challenged people.

The European Union has adopted a 'New Community Disability Strategy' in 1996, which focuses on equal opportunity for disabled persons. This was further developed in a new policy framework in 1999 that targeted the removal of barriers for ensuring full participation in all the spheres of life. In Europe, the meaning of disability is now interpreted as a social phenomenon which was perceived merely medical at past. Discrimination through building and environmental design, inappropriate building management practices and inadequate service provision etc. are less in EU countries. Especially UK, Ireland, Denmark, Sweden, Portugal etc. has adopted laws protecting the rights of disabled people. The global scenario of accessibility of physically challenged people to physical and non-physical environment has been illustrated in the following paragraphs.

2.2 Accessibility by Design – A Standard Guide: United Kingdom

UK has adopted a Standard Guide to represent the requirements of the Building Regulations 2000 and the Building Regulations (Amendment) 2003 of UK. This guide covers the main design considerations and identified five areas of accessibility which include some other important components. The areas are-

Access to Buildings

- a. Car Parking Spaces
- b. External Travel
- c. External Hazards
- d. Approach to the Building
- e. Stepped Access
- f. Accessible Entrances

Access within Buildings

- a. Entrance Lobbies
- b. Entrance Hall and Reception Area
- c. Internal Doors
- d. Corridors and Passageways
- e. Internal Stairs
- f. Vertical Circulation within the Building

Facilities in Buildings Other Than Dwellings

- a. Audience and Spectator Facilities
- b. Refreshment Facilities
- c. Sleeping Accommodation
- d. Switches, Outlets and Controls
- e. Aids to Communication
- f. Sanitary Conveniences
- g. Wheelchair Accessible Changing and Shower Facilities
- h. Wheelchair Accessible Bathrooms

Dwellings

- a. Accessibility
- b. Circulation
- c. (Wheel Chair) WCs within the Dwellings

Interior Ergonomics

- a. Signs and Symbols
- b. Anthropometric Data
- c. Ergonomic Data

2.3 Local and National Monitoring of Accessibility: Denmark

The Danish Standards Association issued 'Accessibility Standard DS 3028 in August, 2001. This standard defines requirements aimed at ensuring general accessibility (including accessibility for disabled persons) to buildings and facilities. The standard is divided into six categories for buildings: (i) buildings which are open to the public; (ii) industrial and

commercial buildings; (iii) house buildings; (iv) buildings for private use; (v) house building for elderly and (vi) disabled persons requiring care; and summer houses. In addition to providing recommendations in a number of matters for each category, the standard also defines the functional requirements that must be met.

2.4 National Accessibility Action Plan, 2000: Sweden

The Swedish government has adopted a holistic national action plan on disability, which ranges across physical accessibility, social provision, culture, education, labor market and funding of disability organizations. Essentially, the Swedish plan addresses physical planning; access to, and use, of buildings; and making all goods and services accessible to disabled persons. Within this plan there is an objective to remove all barriers in public buildings and common spaces before year 2010, and to make public transport systems accessible before 2010. Existing public buildings and other public places must be made accessible for people with disabilities by 2010. Local authorities risk penalties if they fail to provide people with support the courts have found they are legally entitled to receive. Government authorities are to be given special responsibility for ensuring that a disability perspective permits all areas of society. The office of the Ombudsman will have wider powers to tackle complaints about access problems and a National Accessibility Centre has been established (in 2001) to give advice on accessibility matters.

2.5 The Current Accessibility Situation in the ESCAP Region

In the ESCAP region, the incorporation of access needs of people with disabilities and elderly persons in all development plans concerning distinct features of built environments is a comparatively new issue and, as such, has not figured as an area of priority attention in development plans at different levels. However, some countries in the region have made a modest beginning to improve access for people with disabilities and elderly persons to the built environment (Annexure III-B).

Two main trends may be discerned concerning the programs and policies to provide for the access requirements of these social groups. One trend is the incorporation of access needs of persons with disabilities and the elderly in the whole built environment, while the other trend is the development of specialized areas and services to meet the requirements of the groups in question.

Countries like Australia, China, the Islamic Republic of Iran, Malaysia, New Zealand, the Philippines, the Republic of Korea, Singapore and Viet Nam exemplify the first trend, as these countries targeted their policies and legislation to improve accessibility in the whole built environment. In contrast to these countries, access policy provisions and legislation of Japan are initially targeted at the development of designated cities and specialized services to suit the access needs of persons with disabilities and the elderly. In the beginning, ten cities were designated as model and safe cities for these disadvantaged groups. It was reported that these designated cities in Japan had developed around some important railway stations identified accessible areas for these persons. However, national-level access legislation has been enacted and is now in force in Japan for promoting access to public buildings and facilities.

The accessibility situation in the ESCAP region is reviewed from the perspective of the following four main features of the built environment:

- a. Buildings (all types, new and old, public and privately owned);
- b. Public facilities (including educational, cultural, religious, and recreational facilities);
- c. Roads and inland waterways; and
- d. Transport systems, communication, and information.

2.6 Promotion of Equality and Prevention of Unfair Discrimination Act 2000: South Africa

According to this Act under Article 9 (Prohibition of unfair discrimination on ground of disability), no person may unfairly discriminate against any person on the ground of disability, including—

- a. denying or removing from any person who has a disability, any supporting or enabling facility necessary for their functioning in society;
- b. contravening the code of practice or regulations of the South African Bureau of Standards that govern environmental accessibility;
- c. failing to eliminate obstacles that unfairly limit or restrict persons with disabilities from enjoying equal opportunities or failing to take steps to reasonably accommodate the needs of such persons.

2.7 Practical Accessibility Experiences

This section illustrated two research findings that worked out the accessibility scenario in the cities of Asia. First, study, Promotion of Non-handicapping Environments for Disabled Persons: Pilot Projects in Three Cities was conducted in three big cities of Asia i.e. Bangkok, Beijing and New Delhi (ESCAP, 2002). There were some special categories or considerations of accessibility on which the study was conducted. The considerations are- Building entrances, Sidewalks, Toilets (toilet cubicles, urinals and washbasins), Bus stops, Service and information counters, Street gardens and parks, Corridors and staircases, Public telephones and Others. Example of New Delhi is cited here because it is comparable to a city like Dhaka, Bangladesh.

The study emphasized that the built urban spaces created in towns and cities in the form of public utility buildings, market centers, transport networks, office complexes, institutional buildings, recreational and cultural centers, parks and gardens, should be friendly for all users irrespective of their age or level of stamina. The key findings of the study are -

- a. There were no separate walkways with guiding blocks of non-slip material in any of the buildings;
- b. Absence of ramps
- c. In most of the buildings, the high plinth level rendered entry by wheelchair users impossible;
- d. The width of the building entrances and exits was sufficient as per norms and specifications;
- e. The entrance doorway to various buildings was of sufficient width with a minimum threshold level as per norms and guidelines;
- f. In none of the buildings were separate corridors for pedestrians or for wheelchair users available;
- g. There were lifts in 10 buildings that were more than four storeys high; although the doorway of the lifts in all these buildings was sufficiently wide for wheelchair users, the floor button panels were beyond their reach;
- h. None of the toilets were accessible by disabled persons, particularly by wheelchair users;
- i. Audio-visual signage and indicators for diverse disability groups were not available in most of the buildings;

- j. There were no ramps along the roads and footpaths to facilitate movement by pedestrians and wheelchair users; encroachments and unauthorized occupation on footpaths caused considerable inconvenience to free movement;
 - k. Bus stops and local buses were not convenient for use by disabled persons.
- (ESCAP, 2002).

It was proposed that in every building, at least one entrance and one toilet were to be made accessible. Similarly, parking space, corridors and walkways were to be made accessible for the movement of disabled persons. The installation of a new lift was not feasible during the time-frame of the pilot project, as the funds could not be raised to meet the heavy cost involved and because space for such installation was not available. One of the existing lifts, with minimum modification, could be made accessible for disabled persons. Furthermore, signage and indicators would be fixed.

Second study, Enhanced Accessibility for People with Disabilities Living in Urban Areas was conducted to formulate strategy for enhancing accessibility for PWDS in five countries (Venter et.al, 2002). The five case study countries were India, Malawi, Mexico, Mozambique and South Africa.

It has identified three major types of barriers to access mobility which are- social barriers, psychological barriers and structural barriers. Along with these, in developing countries, one of the crucial problems in ensuring accessibility for PWDs is absence of a framework for action to remove the barriers.

Current practices to ensure disability rights mostly in mobility are somewhat similar in these countries. All of these necessarily are not present in each country. The current practices are-

- Policy and legislative approaches.
- Consultation and advocacy
- Disability awareness training
- Information provision
- Improvements to the pedestrian environment
- Improvements to transport infrastructure
- Improvements to vehicle design
- Specialized transport services for people with disabilities.

Preliminary recommendations of the study are made on actions that could be initiated by government and transport providers, in consultation with disability groups. These include



implementing incremental improvements to the pedestrian environment, disability awareness and driver training programs, and low-cost, high-impact features in vehicles (such as a lowered first step, sufficient grab rails, high contrast color on steps, large print destination signs, lights when stopping and reserving seats for passengers with disabilities’.

From the above discussion one can understand that, developed countries made them disability friendly in all spheres of activities by this time. They are in advantageous position and still going ahead through enacting different right protected laws and regulations. In fact, disability development is a movement of nearly hundred years started from 1921 when James Biggs of Bristol UK invented the White Cane for the sight impaired people. So far the latest international recognized action was “Joint Statement on Proposed Structure, Elements and Principles of A Comprehensive and Integral Convention on the Rights of Persons with Disability” adopted on 11 October, 2004. During the interval period the important activities were chronologically ‘UN Declaration on the Rights of Mentally Retarded Persons (1971)’, ‘UN Declaration on the Rights of Disabled Persons (1975)’, ‘United Nations Decade of Disabled Persons (1983-1992)’, ‘The UN Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1993)’, ‘The ESCAP Agenda for Action (1993-2002)’, ‘World Conference on Special Needs Education – Salamanca Declaration (UNESCO, 1994)’ and ‘Biwako Millennium Framework for Action Towards an Inclusive, Barrier-Free and Rights-Based Society for Persons with Disabilities in Asia and the Pacific (2003-2012) (Annexure III-A)’.

CHAPTER 3

Physically Challenged People in Bangladesh

CHAPTER 3

PHYSICALLY CHALLENGED PEOPLE IN BANGLADESH

3.1 Introduction

International disability development discussed in the previous chapters show that movement for accessibility is no longer an effort of developed countries only. Countries of ESCAP region and other developing countries have been taking legal and other measures to ensure accessibility in all spheres. This movement should have a certain positive impact on efforts for the well being of physically challenged people. But unfortunately, sporadic development initiatives are found only. Comprehensive and fruitful legal framework and priorities of the government in this regard was not visible till last couple of years. It is needless to say that, physically challenged people are one of the marginalized sections in Bangladesh. Empirically, their socio-economic conditions are not up to the mark: they are lagging behind from almost every service, opportunities in the society and the state as well. There are shortages of reliable statistics regarding disability issue in the country. Subsequently, legal provisions that can work as safeguard for them are scanty and in the most cases ineffective theoretically and practically as well. The condition of physically challenged people in the country and existing laws and policies related to disability are the focus of this chapter.

3.2 Demography of Physically Challenged People in Bangladesh

Studies conducted by Bangladesh Bureau of Statistics (BBS) could be the best source of status of disability in the country as well as of Dhaka. But BBS has no such recent study. For the first time, BBS (Annexure IV) conducted a sample survey on disability in 1982 and published the material titled *Disabled Population of Bangladesh – Evidences from Demographic Survey, 1982* in 1987. And the next BBS reports of 1991, 2001 and Sample Vital Registration System of Bangladesh of 2002 also provide some statistics on disability.

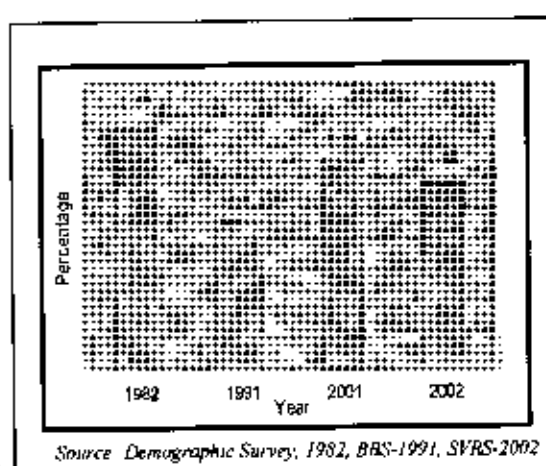


Figure 3.1 Disability Rate in Different Years

According to these BBS reports, a sharp rise and fall in case of number of disabled people in the country is being found. During 1982, the rate was 0.77% that decreased to 0.47% in 1991. In the year of 2001, the rate has increased to 0.662% all around the country.

Literacy rate among PWDs has also decreased from 23.7% (5+) in 1982 to 17.5% (7+) in 1991. In case of occupational status, the situation is of mixed flavor. From 1982 to 1991, rate of technical job holders raised from 0.025 to 1.91%, the rate of managerial jobs remain same - 0.09%, the rate of service category increased sharply from 2.57% to 23.38%.

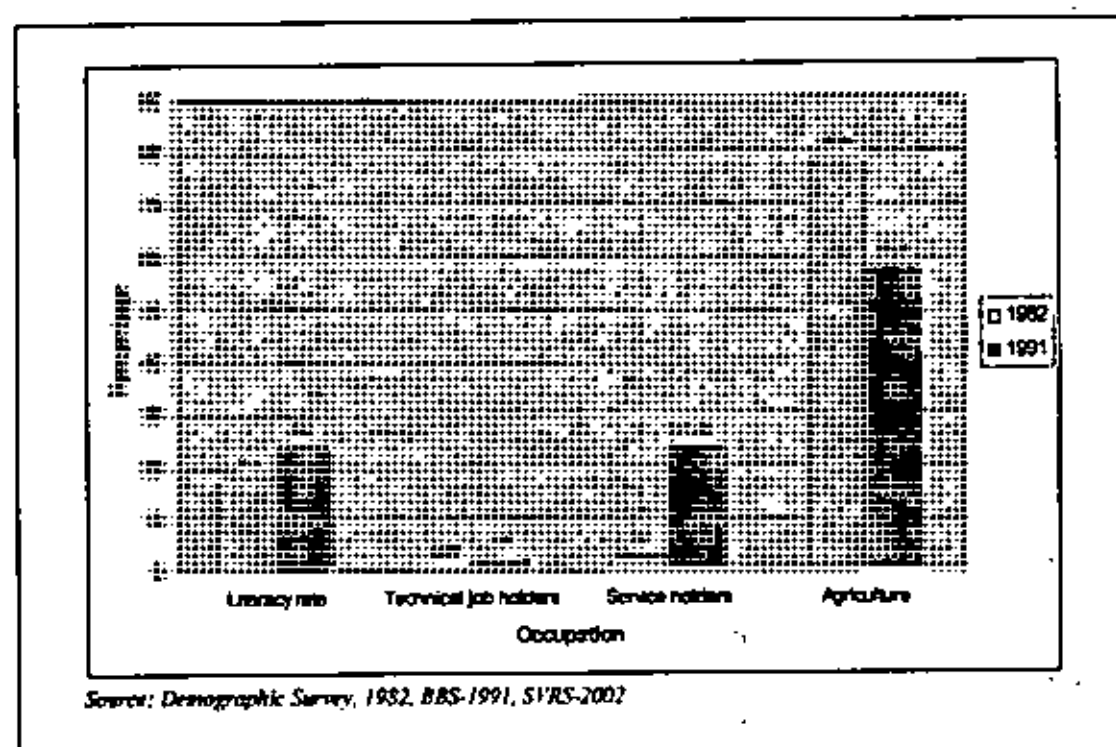


Figure 3.2 Variations in Occupational Category among PWD (1982-1991)

The rate of disabled persons engaged in agriculture sector has also decreased from 78.04% to 57.33% during 1982 and 1991 (Figure 3.2). Increasing proportion of participation of PWDs in economic sector indicates the more active participation of PWDs in the society. Thus it is necessary to ensure an accessible environment for them.

3.3 Accessibility to Urban Services and Facilities

Disability research and development efforts for them both are scanty in the country as mentioned earlier. They are sporadic as well. Table 3.1 presents a summarized scenario of

accessibility of PWDs to selected services and facilities. Information of this table has been collected from various published sources.

Table 3.1 Accessibility to Urban Services and Facilities

<i>Item</i>	<i>Important findings</i>
Accessibility to Education	➤ Available GO and NGO initiatives provide facilities for only 4% of disabled children within the primary school-going age (Rahman, 2004). ➤ Lack of support educative materials (Huq and Akter, 2001). ➤ Dropout rate from primary to secondary level was 64%. Only 3.75% disabled woman has proceeded on to university education (CSID, 2003). ➤ About 94.7% educational institutions do not have any ramp or lift facilities to access the building for physically challenged people (HKI & NFOWD, 2005). ➤ Formal schools teachers have no experience & expertise to teach a child with disability. Neither Government nor NGO emphasized disability education expertise in Teachers Training Institutions like PTI, B.Ed, and others (Huq and Akter, 2001). ➤ Disabled people also experience lack of support from their family regarding access to education (HKI & NFOWD, 2005). ➤ Enrollment in educational institution was about five times greater in areas where disability related activities were found (HKI & NFOWD, 2005).
Accessibility to Health	➤ About 92% of girls and women with disabilities face emotional, physical, and sexual abuses (CSID, 2003). ➤ Most of the girls or women are not much aware of the issues or phases of reproductive health. Especially, the girls with speech and hearing impairments face difficulty to pass this period due to their lack of communication ability (CSID, 2003).
Accessibility to Employment opportunity	➤ 1% quota in Bangladesh Civil Service cadre has been declared by the government for people with disabilities (Rahman, 2004). ➤ About 79% disabled people in urban areas are involved in any kind of jobs, whereas in the rural areas the rate is about 78% (CSID, 2002). ➤ Problems in getting employment are - lack of cooperation, negative attitude, lack of accessibility and adaptability, lack of initiatives in the further development of skills, lack of awareness of employees in realizing the difficulties etc. (CSID, 2002).
Accessibility to Transportation	➤ Only 21.4% of bus terminals have the provision of ramp. About 7.1% of them maintained the standard ratio of the map (HKI & NFOWD, 2005). ➤ Only 20% of the footpaths were free from obstacles (HKI & NFOWD, 2005). ➤ About 60% of the road widths are below standard required for persons with disabilities (HKI & NFOWD, 2005). ➤ None of the roads had any pedestrian crossing, separate traffic lights or alarm bells, or curb ramps for people with disabilities (HKI & NFOWD, 2005). ➤ Only about 15.8% of the vehicles had the accessible door width of 300mm (3'-0") (HKI & NFOWD, 2005)

Source. Compiled by researcher from (CSID, 2002); (CSID, 2003); (Rahman, 2004) and (HKI & NFOWD, 2005).

<i>Item</i>	<i>Important findings</i>
	➤ Only 15.8% steamers or launches have a ramp installed at the doorway, but none were wheelchair accessible (HKI & NFOWD, 2005). ➤ About 36.8% of the vehicles have an audible system necessary for visually impaired people (HKI & NFOWD, 2005). ➤ About 31.3% of buses and trains had low level steps to avail, but none of them had accessible corridor width necessary for wheelchair users. ➤ Bangladesh Road Transport Corporation (BRTC) and Nirapad bus service (a private owned public bus service) reserves few seats in each bus for PWDs (Prothom Alo, 2004). ➤ Government took decision to create separate ticket counter for PWDs in railway stations (Rahman, 2004).
Accessibility to Housing & others	➤ Only 42.9% of the residential buildings have the required size of the toilet compartment and 28.6% of them had clear space inside the toilet for turning a wheelchair (HKI & NFOWD, 2005). ➤ About 57.1% of the stairs have the required width of landing space for turning the wheelchair (HKI & NFOWD, 2005). ➤ About 28.6% of post boxes in the post offices are found with accessible letter dropping mouth height (HKI & NFOWD, 2005). ➤ There are 20% markets with ramps beside the entry level. About 80% of the surfaces of the stairs are found as slip resistant (HKI & NFOWD, 2005). ➤ Only 15.8 of the buildings of employment are accessible (HKI & NFOWD, 2005). ➤ Furniture and other facilities in the employment sector are not consciously designed (HKI & NFOWD, 2005). ➤ About 41.7% of the health institutions had ramp facilities, but only 5.26% of them posses the required ratio of slope between 1:12 to 1:20 (HKI & NFOWD, 2005). ➤ The conditions of public toilet are very poor and hence inaccessible to the PWDs (HKI & NFOWD, 2005).
Accessibility to Government Buildings	➤ There are only 5% having lift facility in case of government buildings. There was complete lack of ramp facilities at the entrance (HKI & NFOWD, 2005). ➤ About 30% of the government buildings have accessible toilets both for male and female with required size of compartment (HKI & NFOWD, 2005).
Accessibility to Cultural and Recreational Built Structures	➤ No clubs have any Braille documents, or counters and desks with required height. No accessible ablution space in the Mosque or required corridor width between seats at the front and the back of the Church (HKI & NFOWD, 2005). ➤ No parks surveyed have any ramp at the entry level (HKI & NFOWD, 2005).
Accessibility to Information and Communication	➤ None of the spaces under the study are identified by the international symbol of accessibility (HKI & NFOWD, 2005). ➤ There is complete lack of information in Braille or Tactile form in shopping complexes to shop independently (HKI & NFOWD, 2005). ➤ Cost of computer software like Job Access With Speech (JAWS) Braille printers, special keywords and such is unaffordable and hence inaccessible (HKI & NFOWD, 2005). ➤ Newspapers are not released in Braille (HKI & NFOWD, 2005). ➤ There is no close captioning or provision of Interpreter on television programs, so that deaf people can get the news (HKI & NFOWD, 2005).

Source: Compiled by researcher from (CSID, 2002); (CSID, 2003); (Rahman, 2004) and (HKI & NFOWD, 2005).

<i>Item</i>	<i>Important findings</i>
Other Areas	➤ About 70% of the disabled people of the country need rehabilitation services, including medical rehabilitation and social integration (Rahman, 2004). ➤ There are nearly 500 trained personnel of occupational therapy working all round the country (Rahman, 2004). ➤ Only 2% of adolescent girls with disability got marriages in the country; people are still hesitant to marry a disabled girl (CSID, 2003). ➤ Mothers are still blamed for giving birth to a disabled child. (CSID, 2003).

Source. Compiled by researcher from (CSID, 2002); (CSID, 2003); (Rahman, 2004) and (HKI & NFOWD, 2005).

3.4 Institutions Involved for the Welfare of Physically Challenged People in Bangladesh

Development paradigm at present world is partnership, where the government facilitates and the private sector take actions. The paradigm is valid and fruitful as well in almost every case. But unfortunately, no such clear cut approach is found in case of ensuring accessibility for PWDs in Bangladesh. Rather, disability development initiatives are found unorganized, and operated mainly by the private organizations. In recent days, Government machineries are also become active in this regard.

3.4.1 Public Institutions Working for Physically Challenged People

Social Welfare Department and National Disability Foundation (NDF) under the Ministry of Social Welfare are the executive agencies of GOB for disability development in the country. They undertake various programs and projects for the well being of persons with disabilities. Table 3.2 presents the list of activities and geographical coverage of the projects undertaken by social welfare department.

Table 3.2 Activities and Geographical Coverage of Programs under Social Welfare Department

<i>Sl. No.</i>	<i>Name of the program</i>	<i>Area coverage/Nos</i>
1.	Rehabilitation of acid burned women and physically disabled	All upazilas
2.	Training and rehabilitation center of socially disabled girls	6 Nos.
3.	Integrated blind education	All districts
4.	Center for mentally disabled	1 No.
5.	Education of children with sight impairment	5
6.	Education of children with hearing impairment	8 Nos.
7.	Braille press	1 No.
8.	Center for production of artificial limbs	1 No.
9.	National training and rehabilitation program for persons with sight impairment	1 No.
10.	Training, employment and rehabilitation program for physically disabled	1 No.
11.	Mineral water plant runs by disabled people	1 No.
12.	Grant/Credit program for disabled people/organization working for disabled	64 (All districts)

Source: Agragatir Tin Bachar, (2004) Ministry of Social Welfare, People's Republic of Bangladesh

National Disability Foundation (NDF), on the other hand performs some specific tasks on behalf of the government for the physically challenged people. There are three organizations under NDF (Table 3.3)

Table 3.3 Organizations under National Disability Foundation

	<i>Name</i>	<i>Important details</i>
1.	National Center of Special Education	➤ There is a Teachers Training College and two separate schools for Hearing Impairment and Mentally Disabled at the center located in Mirpur, Dhaka. These two schools can accommodate 70 students. Total number of teaching and associated staffs is 48. ➤ By the end of 2004, about 350 teachers got training on special education from the institution. Among them about 25-30 were sight impaired. ➤ Some fresh graduate are also coming to get additional training and being advantaged with a view to play bigger role in education.
2.	SWID-Bangladesh (Society for the Welfare of the Intellectually Disabled-Bangladesh)	➤ It gives assistances to 40 schools for intellectually disabled around the country of which the number of students is 7,000.
3.	Bangladesh Disability Foundation	➤ This is a private organization under the National Disability Foundation working in Manikganj and Dhaka districts for disability development

Source: Agragatir Tin Bachar, (2004) Ministry of Social Welfare, People's Republic of Bangladesh,

3.4.2 Private Institutions Working for Physically Challenged People

More than 200 non-government organizations are working for disability development in the country (NFOWD & Action Aid Bangladesh, 2002). Activities of some of these organizations concentrated only on disability and disabled people, many of them have action programs on disability partially. In Dhaka, there are 72 organizations (NGO and or privately owned) working especially on disability. It is to be noted here that, the level of services and facilities provided by these NGOs were sought in accordance with a pre-set information format (Annexure VI-C).

3.4.2.1 Approach of Program

The program approaches followed by the non-government organizations working with disability are of various types. Even one organization works in multiple approaches depending on the target group and program objectives. The strategies, plans and actions

undertaken by the NGOs depends on their perception how these organizations view disability. However, three types of approaches were found. These are Institution Based Rehabilitation (IBR)¹, Community Based Rehabilitation (CBR)² and Community Approaches to Handicap in Development (CAHD)³. It was explored that, about 68.06% of the NGOs are working in CBR approach, whereas about 38.89% NGOs are doing their programs in IBR approach.

Table 3.4 Approach of Program of NGOs Working for Disabled in Dhaka (up to 2002)

<i>Program approach</i>	<i>Responses</i>	<i>Sample size</i>	<i>% of response (on the basis of total respondent)</i>
IBR	28	72	38.89
CBR	49		68.06
CAHD	18		25.00
Others	23		31.94

*Source: A Directory of Organizations Working in the Field of Disability in Bangladesh 2002;
NFOWD & Action Aid Bangladesh*

Study findings show that, 25% organizations conduct their plans in CAHD approach. National Disability Development Foundation, the only government institution works for disability in CAHD approach.

3.4.2.2 Available Services

Non-government organizations offer various types of services for the development of disabled people; starting from basic education, skills training to health services, micro-credit etc. Table 3.5 shows the types of services offered by the NGOs in Dhaka. All the surveyed institutions (72) have multiple types of activities and total responses of activities were 180 in number.

¹ IBR is an approach mostly in cities and carried out by Professionals. In this approach decisions are taken considering ideal condition. It is expensive and medical in nature.

² CBR is a STRATEGY within general community development for rehabilitation, equalization of opportunities and social inclusion of all people with disabilities.

³ Community Approaches to Handicap in Development (CAHD) is a concept developed in Bangladesh by the Centre for Disability in Development (CDD) with the collaboration of Handicap International and Christoffel Blindenmission (CBM). This method enables the various organizations involved in development to include disabled people in their activities.

Table 3.5 Services Offered by the NGOs Working in Dhaka (up to 2002)

<i>Service type</i>	<i>Responses</i>	<i>Total respondent</i>	<i>% of response (on the basis of total respondent)</i>
Advocacy and awareness	36	72	50.00
Education	28		38.89
Physiotherapy	22		30.56
Skills training	22		30.56
Training and TOT	7		9.72
Information and research	9		12.50
Assistive device and accessibility	15		20.83
Treatment	20		27.78
Financial assistance to Disabled People's Organizations (DPO) or micro-credit	8		11.11
Income generation program	13		18.06

Source: *A Directory of Organizations Working in the Field of Disability in Bangladesh 2002*, NFOWD & Action Aid Bangladesh

It was found in the study that, most of the NGOs, about 50% of the total, do advocacy and awareness raising activities for disability. About 38.89% NGOs are involved in disability education – formal and non-formal. About 30.56% NGOs offer skill training to the disabled people. Similar percent of NGOs also provide physiotherapy while about 27.78% give other different medical facilities to the persons with disability. The ratio of NGO working in the field of assistive device and accessibility is 20.83%. About 29.17% NGO have program on income generation and providing micro-credits to the Disabled People Organization (DPOs) and individuals with disability. Remind that, all the organizations except the designated above 50% have some basic and small advocacy and awareness building program.

3.4.2.3 Number of Beneficiaries

Number of beneficiaries of the disability development program of these NGOs is not bad though not satisfactory. About 16 lakhs people with disabilities were directly supported in Dhaka up to 2002. Among them 46.6% were female. The table below is showing the number of disabled beneficiaries by disability type up to 2002 in Dhaka –

Table 3.6 Persons with Disability Directly Supported by NGOs Working in Dhaka (up to 2002)

<i>Disability type</i>	<i>Female</i>	<i>Male</i>	<i>Total</i>
Physical impairment	49597	56984	106581
Hearing and or speech impairments	5932	6816	12748
Sight impairment	8989	7374	16363
Intellectual disabilities	5407	7454	12861
Multiple disabilities	3290	3679	6969
Data of 2001 (13 NGOs)	1814	3780	5594
Total	75029	86087	161116
Percent (%)	46.6	53.4	100

Source: A Directory of Organizations Working in the Field of Disability in Bangladesh 2002; NFOWD & Action Aid Bangladesh

Number of staffs in disability program in these NGOs is 3514, of which physically challenged staffs are 221. Among the staffs with disability, 32.7% are female.

Table 3.7 Staff Available to Cater Disability (up to 2002)

<i>Type</i>	<i>In 2002</i>			<i>In 2001 (13 NGOs)</i>	<i>Total</i>
	<i>Female</i>	<i>Male</i>	<i>Sub-total</i>		
Fit staff	735	956	1691	1823	3514
Staff with disability	52	107	159	62	221

Source: A Directory of Organizations Working in the Field of Disability in Bangladesh 2002; NFOWD & Action Aid Bangladesh

It is clear from the above discussion that, government under its different organs and non-government organizations are doing basically rehabilitation works, providing education, physiotherapy, operating skills training activities, micro-credit programs. Most importantly, there is advocacy and awareness program from both the sectors so that disability issue can be mainstreamed. There is also large amount of financial involvement from both the parties in disability development activities found. Creating accessible social and built environment is also a motto of some organizations. To ensure accessibility some organizations are producing assistive devices. Undoubtedly, these disability development activities are praiseworthy. But unfortunately, there are some lacunas in the agenda as assessed by some school of thoughts. Many organizations do very nominal in disability development, merely concentrated only awareness building occasionally and showing PWDs to earn money from the donors. In case of government programs the focus found is to financial assistance and number of

beneficiaries. But the quality is a remote issue. There is also problem of monitoring the development activities. Problem also lies in addressing the issue systematically. Different organizations view disability development in very different way. And these differences unfortunately have created hostility in disability development activities and among the organizations which ultimately negate the mainstreaming and development of persons with disabilities.

3.5 Policy and Acts for Physically Challenged People in Bangladesh

There are very few policies and acts for the wellbeing of physically challenged people in Bangladesh. Fortunately, the situation is turning out; during last few years some actions have been taken place. In 1995, Bangladesh has adopted a National Policy on Disability for the first time. In 2001, Disability Welfare Act was enacted. Moreover, there are some Circulars of the Govt. protecting rights of disabled people in the country. And the Constitution is necessarily exists for physically challenged people as a safeguard like any other marginalized people.

3.5.1 Fundamental Rights (Part III) in the Constitution of Bangladesh

The Constitution of Bangladesh has 11 parts describing the basic principles and regulations of the executive, legislature and judiciary. Part III of the Constitution (Articles 26 to 47) depicts the fundamental rights of people living in the country. These articles call for equality, equity and non-discriminations which are also applicable for the disabled people. Article 27 has illustrated the prime thing 'all citizens are equal before law and are entitled to equal protection of law'. Article 29(3), is also an important one, has described 'nothing in this article shall prevent the state from – (a) making special provision in favor of any backward section of citizens for the purpose of securing their adequate representation in the service of the Republic'. In fact, the Constitution has protected all the rights of the people with disabilities.

3.5.2 The National Policy on Disability, 1995

As earlier said, the constitution of Bangladesh has defined the rights of people with disabilities. Bangladesh is one of the signatories of international conventions and instruments protecting the rights and dignity of persons with disabilities also. To carry out its vision regarding disability issue, Bangladesh has adopted the National Policy on Disability in 1995.

The policy has 14 sections with sufficient sub-sections elaborating the policies. The sections are-

a) Prevention

This section has been illustrated the measures that need to be taken to reduce the causes of disability across the country particularly, in the rural areas.

b) Identification and Intervention

How the persons with disabilities will be identified and what could be the management measures – has been illustrated in this section.

c) Early Intervention

Early intervention can reduce the effect of disability comprehensively, especially where prevention seemed impossible. That is why, home based training and stimulation activities should be started from the early age of children with disabilities. This section has identified the processes of early intervention of disability.

d) Assistive Devices (Aids and Appliances)

Assistive devices should be made available and accessible to the persons with disabilities in order to reduce vulnerability and increase the opportunity of employment and accessibility. This section includes the financial matters of the devices.

e) Education

This section has identified the measures that will be taken for educating the persons with disabilities specially children. Special education system including education materials, training both for teachers and students etc. are the aspects of this section.

f) Rehabilitation

The features of this section are healthcare, delivery of assistive devices, vocational education, counseling services etc. as measures of rehabilitation of persons with disabilities.

g) Human Resources Development

Adequate human resources development measures have been illustrated in this section to enhance the facilities, rehabilitation services and other requirements for persons with disabilities.

h) Employment

Employment opportunities will be created for disabled people. There should be quota in BCS examination, relaxation in promotion etc. to enhance the accessibility to employment.

i) *Research*

This section identified the importance and measures of research and documentation at national level for development of persons with disabilities in the country.

j) *Accessibility and Communication (Transportation)*

Persons with disabilities are to be included in the nation building process. This section has identified and showed the measures, how they could be incorporated in the development activities through making accessible the built environment, transportation etc.

k) *Information*

All the information should be disclosed to the persons with disabilities. To make this happen, state media will take necessary actions depending on the nature of disability.

l) *Recreation*

Recreational activities and facilities should be made accessible to the persons with disabilities. This section listed the measures taken by the government to ensure such type accessibility.

m) *Self-help Movement*

Self-help movement for eliminating domination, inequality and inferiority complexity of the persons with disabilities will be entertained highly by the government. Government will take necessary steps to assist their self-help movement.

n) *Implementation & Coordination*

This section has identified the managerial aspects of the policy for disability development.

3.5.3 Bangladesh National Building Code (BNBC), 1993

Bangladesh National Building Code has been introduced in 1993. This code is vital for accessibility of disabled people in the built environment. The accessibility issue in the code has been explored best by Borg (2004), in his paper '*On Bangladesh National Building Code from a Perspective of Accessibility for People with Disabilities*'. Borg showed that the BNBC has mentioned people with physical and mental disabilities, but it did not address their needs for an accessible environment adequately. Among Ten Parts of the BNBC-1993, Six Parts (1, 3, 4, 5, 8 and 10) emphasized the recognition and accessibility options for people with disabilities.

Part 1; illustrates the definition and scope of the code that is applied for all the people including people with disabilities of the country.

Part 3; did not make out the width of walkway, ramps, height of raisers and handrails in staircases etc. Hence, they are not convenient for people with disabilities.

Part 4; identified the specific requirements. Some of the specifications are OK and some are not for people with disabilities. Ramp specifications in entry and exit of buildings are not sufficient for PWDs, minimum width of doorway is acceptable, minimum clear widths of exits and corridors of custodial and penal and mental institutions are adequate etc.

Part 5; where nothing is said about the inconvenient and risky building materials used for people with disabilities.

Part 8; emphasized the interior facilities and their accessibility to people with disability i.e. water closet, toilets, door bells, location of main switch boards, lifts and its dimensions for accessibility etc. many of which are not accessible for people with disabilities.

Part 10; described about the signs and outdoor displays of buildings and facilities which are very important for people with disabilities and even for fit people as well.

In fact, according to this paper, many of the provisions of the code are not compatible for people with disabilities. Moreover, exact implementation of the BNBC-1993 will also create inaccessible environment for them (Borg, 2004). If the rights and facilities mentioned in People with Disability Welfare Act-Bangladesh 2001 are to be seen in reality the policy makers should do something more regulatory measures associated with BNBC-1993.

3.5.4 Bangladesh Disability Welfare Act, 2001

Bangladesh Disability Welfare Act was enacted in 2001 to protect and safeguard the rights and dignity of the persons with disability, ensure their participation in the national and social programs and their general welfare. The act has 22 sections identifying the legal aspects of disability, committees aiming to fulfill the acts etc. There is also a Schedule consisting 9 sections. The sections are-

- Part A : Prevention of Disabilities
- Part B : Identification of Disability
- Part C : Curative Treatment of Disability



Part D	: Education of the Persons with Disabilities
Part E	: Health Care Services for the Persons with Disability
Part F	: Rehabilitation and Employment of the Persons with Disabilities
Part G	: Transport Facilities
Part H	: Culture
Part I	: Social Security
Part J	: Organizations of the Persons with Disability.

3.5.5 Dhaka City Building Construction Rules, 2006 (DCBCR-2006)

Dhaka City Building Construction Rules, 2006 has specified the accessibility standard for physically challenged people for the first time in Bangladesh. Rule 75 of DCBCR-2006 illustrates the universal accessibility including disabled people accessibility to urban service-facilities. The focus of the Rule 75 is primarily physical accessibility (entry/exit, ramp/handrail & lift), commercial building, shopping complexes, health institutions, educational institutions etc. Specific attention of the rule is given on toilet/washroom and parking facilities for the physically challenged people.

However, some deficiencies are found in the rule. Firstly, the rule did not define who are disabled/physically challenged. This can create implementation problem of the rule. Secondly, it did not ensure mandatory use of brail button in the lift, accessible floor materials in the built structure, and did not specify the space requirement for the wheel chair movement and specific distant in the footpath. Furthermore, the rule did not describe the level (height) of footpath and adjacent ground/land. Without these specifications it is difficult to ensure comfortable space for PWDs.

So this chapter has illustrated the global scenario of disability development activities in the field of accessibility. Subsequently, it has focused on the relevant policies, laws and acts of under execution in Bangladesh. It has also identified some drawbacks of the existing legal options for improving accessibility condition of the physically challenged people.

CHAPTER 4

Socio-economic and Socio-cultural Status of Physically Challenged People

CHAPTER 4

SOCIO-ECONOMIC AND SOCIO-CULTURAL STATUS OF PHYSICALLY CHALLENGED PEOPLE

4.1 Introduction

Exploring the socio-economic and socio-cultural status of physically challenged people is one of the prime objectives of this research. Socio-economic indicators include basic demographic features like number of disability type, household size, education etc. Income, occupation and expenditure, represent the economic aspects of PWDs. Cultural and social acceptability of disabled people, attitude/behavior of fit people to PWDs are the issues of socio-cultural status of them. To get collect data on these variables 'A Type' questionnaire (Annexure VI) was developed. Accessibility conditions, problems in accessing urban service-facilities and their solutions also explored through this questionnaire. It is to be noted here that, number of disabled people in Dhaka City Corporation (DCC) is found 22,642 (Detail in Chapter One). Among them, 150 samples have been surveyed all around DCC. However, this chapter describes the study findings regarding social, economic and cultural status of physically challenged people in Dhaka city.

4.2 Demographic Features of Surveyed Physically Challenged People

This study conducted questionnaire survey on 150 physically challenged people in the study area. Among them, 49 respondents were physically handicapped while 59 respondents were sight impaired. Speech and hearing impaired respondents belong to 37 and 11 respectively.

Among the respondents, 72.7% were male while the rest 27.3% were female of different age groups and varying degree of marital status. About 57% of the respondents got married while only 4% of the respondents found not having husbands/wives. The respondents were mostly from ages of 10-20 and 21-30. About 54.6% of the respondents belong to these two groups. Only 10.7% of the respondents are over 50 years of age. Table 4.1 shows the distribution of age group of the respondents.

Table 4.1 Age of the Respondents

<i>Age group</i>	<i>Frequency</i>	<i>Percent (%)</i>
10-20	41	27.3
21-30	41	27.3
31-40	34	22.7
41-50	18	12.0
50+	16	10.7
Total	150	100.0

Source: Field Survey, 2006

Average household size of the physically challenged people in Dhaka is 3.9. The larger portion of the respondents (39.3%) belongs to four member family. The Table 4.2 shows the status of household size of the respondents –

Table 4.2 Household Size of the Respondents

<i>Household size</i>	<i>Frequency</i>	<i>Percent (%)</i>
2	16	10.7
3	35	23.3
4	59	39.3
5	28	18.7
6	12	8.0
Total	150	100.0

Source: Field Survey, 2006

Total number of family members of the respondents in the study was 427. Among them 49.2% were male and 50.8% were female members. The highest ratio belongs to the age group of 10-20 which is about 26.7% of the total family members. The second highest ratio was age group of 41-50 representing 23%.

Educational qualification of the respondents and their family members

Educational qualification of the physically challenged people surveyed under the study is quite good. 13.33% of the respondents have honors level education. About 42% of the respondents have passed SSC and HSC. About 19% of the respondents are illiterate.

Table 4.3 Educational Qualification of the Respondents

<i>Educational qualification</i>	<i>Frequency</i>	<i>Percent</i>
Illiterate	28	18.67
Elementary	17	11.33
Primary	22	14.67
SSC	34	22.67
HSC	29	19.33
Honors	20	13.33
Master	0	0.00
Total	150	100.00

Source: Field Survey, 2006

About 56.7% of the educated respondents received education in general education system, while 13.34% took education in special education. Educational qualifications of family members have also been found out in the study. About 91% of these family members have education starting from primary to graduate level. 34.4% of them have basic primary education, while 19.4% have HSC level education followed by SSC level (17.3%). Table 4.4 shows the educational qualification of family members of the respondents –

Table 4.4 Educational Qualification of Respondents' Family Members

<i>Educational qualification of the members</i>	<i>Responses</i>	<i>Percent (%)</i>
Illiterate	16	3.7
Elementary	50	11.7
Primary	147	34.4
SSC	74	17.3
HSC	83	19.4
Honors	57	13.3
Master	0	0
Total responses	427	100.0

Source: Field Survey, 2006

4.3. Economic Status

4.3.1 Occupation and Income

About 75% of the respondents are engaged in various types of jobs. Among the unemployed respondents, 27% were students of different levels. Almost half (51%) of the employed respondents has unclassified jobs like making crafts, begging etc.

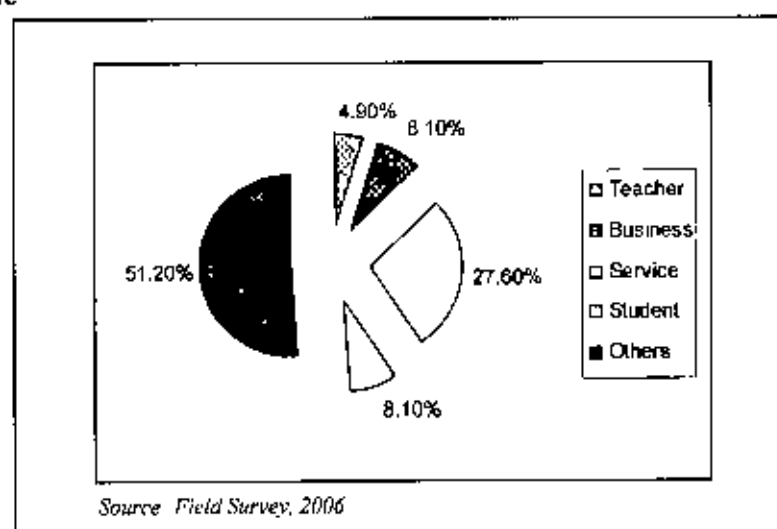


Figure 4.1 Occupational Distribution of the Respondents

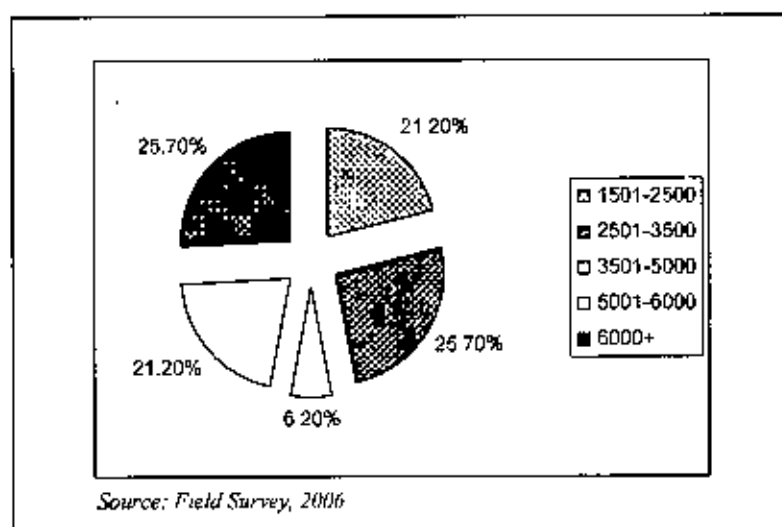


Figure 4.2 Income Range of the Respondents per Month

It was found that, 25.7% respondents have income range of Tk.2501-Tk.3500. The same percentage belongs to income more than Tk.6000.

The Table 4.5 represents the occupational status of family members of the respondents. It was found that, about 80.60% family members are unemployed. Among them 29.20% are housewives whose jobs are not financially evaluated in the society and 42.20% are students. Among the employed family members, only 9.5% have so called services while about 17% are businessmen.

Table 4.5 Occupation of the Respondents' Family Members

Occupation of the members	Responses	Employment		Percent (%)
		Employed	Unemployed	
Business	68	112		17.4
Farmer	7			1.8
Service	37			9.5
Housewife	114		279	29.2
Student	165			42.2
NA	36			9.2
Total	391		391	100.0

Source: Field Survey, 2006

The minimum income of a member who has a classified job found in the study is Tk.3500, while the average is 7430.69. The highest amount of income, in case of family member of the respondents, is Tk.15000. Only 7.1% of them receive this amount of money each month. Here is the table showing the status of income of family members who are employed –

Table 4.6 Income of the Respondents' Family Members

<i>Income range</i>	<i>Responses</i>	<i>Percent (%)</i>
1-3500	21	18.7
3501-5000	19	17.0
5001-7000	13	11.7
7001-9000	33	29.5
9000+	26	23.1
Total	112	100.0

Source: Field Survey, 2006

4.3.2 Expenditure

It was found in the study that, about half (49.7%) of the total expenditure of family of a disabled people in Dhaka goes for food. The second largest portion goes for arranging transportation to the workplace and other family needs, which is about 15%. For education, a family of disabled people expends about 12%. Only 5.4% of the total expenditure found for medical treatment – expenses for medicine, assistive devices, doctors etc. both for the respondents and their family members.

Table 4.7 Expenditure Pattern of the Respondents

<i>Item</i>	<i>Total Expenditure last month (taka)</i>	<i>Percent (%)</i>
Food	497000	49.7
Clothing	75100	7.5
Education	123400	12.3
Medical treatment	54400	5.4
Transportation	148350	14.8
Other specified purposes	101050	10.1
Total	999300	100

Source: Field Survey, 2006

The following table shows the average, minimum and maximum expenditure required incurring to meet the monthly demand of the respondent's family.

Table 4.8 Average, Minimum and Maximum Expenditure

<i>Item</i>	<i>Food</i>	<i>Clothing</i>	<i>Education</i>	<i>Medical treatment</i>	<i>Transportation</i>	<i>Other specified purposes</i>
Mean	3313.33	521.52	1164.15	415.26	1059.64	1010.50
Minimum	1200.00	150.00	50.00	50.00	200.00	150.00
Maximum	5500.00	1000.00	3000.00	2000.00	2500.00	3000.00

Source: Field Survey, 2006

Average expenditure for food consumption is Tk.3313.33, while the minimum and maximum are Tk.1200 and Tk.5500 respectively. The minimum expenditure for education and medical treatment is only Tk.50 each. The highest amount of other specified expenditure is found

Tk.3000 which is mostly house rent. Persons with disabilities spend a handsome amount of their income in transportation and communication. Average expenditure for transport found is about Tk.1060. This was because the disabled persons are to use safe and accessible transport mode i.e. CNG/auto-rickshaw, Taxi Cab or Rickshaw. Mass transport modes are almost inaccessible to wheel chair bound people and even for the person with sight impairment. Moreover, it was also commented by the PWDs that CNG/Taxi drivers and Rickshaw pullers demand high fare to them.

4.4 Cultural and Social Accessibility

Cultural and social accessibility represents the accessibility conditions to family and social affairs. Whether physically challenged people is well accepted in the family and society or not, whether they are effectively included in the family matters or not, behaviors to disabled people are the key issues of cultural and social accessibility. The table below reflects the cultural and social accessibility conditions of physically challenged people in Dhaka found in the study –

Table 4.9 Cultural and Social Accessibility

<i>Cultural and social accessibility</i>	<i>Responses</i>					
	<i>Frequency</i>			<i>Percent</i>		
	<i>Yes</i>	<i>No*</i>	<i>Total</i>	<i>Yes</i>	<i>No</i>	<i>Total</i>
Assistance in movement from the family at home	145	5	150	96.67	3.33	100
Assistance in movement from the family in outside	142	8	150	94.67	5.33	100
Taking food together with family member	137	13	150	91.33	8.67	100
Family members consult with disabled people	114	36	150	76.00	24.00	100
Family members' respect of disabled people's consent	129	21	150	86.00	14.00	100
Enjoy TV/Radio together with family member	117	33	150	78.00	22.00	100
Opportunity to go for movie or theatre with family member	26	124	150	17.33	82.67	100

Source: Field Survey, 2006

*Not answered

So it was found that, the disabled people got enormous assistance from the family at home and going outside – 96.67% and 94.67% respectively. About 76% of the respondents enjoyed the decision making power altogether with the family member. About 86% of the respondents watch TV and hear radio together with the family member found in the study. Unfortunately,

very few of them, only 17.33% got the opportunity to go outside with family members to movie or theatre.

Table 4.10 Behavior of Family Members with the Respondent

<i>Behavior</i>	<i>Frequency</i>	<i>Percent (%)</i>	<i>Valid Percent (%)</i>
Good	96	64.0	66.2
Moderate	34	22.7	23.4
Poor	15	10.0	10.3
Missing/NA	5	3.3	100
Total	150	100.0	

Source: Field Survey, 2006

The study showed that, 96.7% of the physically challenged people responded in the question about family behavior with them. About 66% of these respondents told that they received good behavior from their family members. And according to 10.3% of the respondents family behavior towards them is poor.

The respondents face different types of problems in the family and family activities, which are explored in the study. It was found that, about 33% of the physically challenged people face problem with inaccessible daily basic facilities like accessing water, sanitation, food etc. Such types of problems are crucial for persons with sight impairments and with physical disability. Another difficulties found in case of persons with sight impairments is that they can not recognize unknown persons (18.9%) and it create problem to the safety and security to the family. About 29.7% of the respondents told that, they need family assistance in doing daily activities, which might be reduced if accessible facilities are available.

In short, on the basis of the above findings - it can be said here that, the overall socio-economic and socio-cultural status of physically challenged people living in Dhaka are not good at all. Their family size is big; more than half of them were in the age group of below 30 who are supposed to be the active work force, though they are not economically as much productive in real term due to their physical disability. Samples were taken in such a way that, the respondents with better understanding of accessibility condition is covered. As a result, better level of literacy is found among the respondents in the study. It was also found in the study that, about 75% of the respondents are engaged some sort of jobs. The condition of cultural and social activity was not good explored in the study. About quarter respondents face negative attitudes in their family life. So there are lots of scopes to improve the socio-economic and socio-cultural conditions of persons with disabilities in Dhaka and the country as well.

CHAPTER 5

Accessibility of Physically Challenged People to Selected Urban Services and Facilities

CHAPTER 5

ACCESSIBILITY OF PHYSICALLY CHALLENGED PEOPLE TO SELECTED URBAN SERVICES AND FACILITIES

5.1 Introduction

This part contains the findings and analysis of accessibility condition for PWDs to urban services and facilities i.e. education, health employment opportunity and built environment. The findings derived from the questionnaire survey, has been substantiated by some observations on shopping complexes, government & private buildings, educational institutions, health institutions, parks, play grounds, piers and jetties. The whole analysis has also been substantiated by different journal materials, other research findings, available statistics of home & abroad and case studies.

5.2 Accessibility to Urban Services

5.2.1 Accessibility to Education

The education policy 'education for all' was initiated to include boys and girls from all corners of the society. As a result, the enrollment ratio at primary level has been raised from the estimated value 64% in 1990/91 to 89% in the year of 2001/02 (UNDP, 2003). Drop out rate has also been reduced. Several other programs like, National Education Policy 2000, Reaching out of Children Project, Primary Education Stipend Project, Female Secondary Stipend Project, Female Secondary School Assistance Project etc. have also helped in increasing literacy rate in the country. Literacy rate in the country at present is 62.5%. But the question arises whether these policies are enough to include the marginalized people? So far examined, especially the disabled children and adult as well, have been left out from the scenario. Only 4% of physically challenged children have access to the education facilities provided by government and non-government organizations. Inclusive Education Program has been taken to overcome the problem. There is also integrated education program for the disabled. But the result is not seen as perceived. In fact, this is a both way process. There are shortages of educational institutions and also lacking of favorable environment. There are only 69 schools for blind, 2 schools for speech and hearing impairment and only 2 schools for mentally retarded children all around the country (Mamun, 2000). And favorable environment – represents the congeniality of the teachers and other students. Education materials are both inadequate and costly. In 83% cases, there exists negative attitude in educational institutions towards disabled children (HKI & NFOWD, 2005). And 53% family

creates obstacles in getting education (HKI & NFOWD, 2005). Inaccessible building design is also another major constraint in getting education for the PWDs. In a study conducted all around the country, it was found that, 94.7% educational institutions do not have any ramp or lift facilities to access the buildings (HKI & NFOWD, 2005).

There is one 'Training, Employment and Rehabilitation Center for Physically Disabled' for sight, speech & hearing impaired, one integrated school for sight impaired, one school for intellectually disabled [assisted by *Society for the Welfare of the Intellectually Disabled-Bangladesh* (SWID-Bangladesh) located in Dhaka run by the government. There are also two separate schools for Hearing Impairment and Mentally Disabled at the center located in Mirpur, Dhaka under National Center for Special Education. Except the SWID-Bangladesh the schools can cover only 145 students in total. On the other hand, roughly 72 organizations (NGO and or privately owned) (NFOWD & Action Aid, 2002) has been working especially on disability in Dhaka. About 15.60% of these NGOs have education program - formal and non-formal for PWDs.

However, a study (CSID, 2003) conducted by CSID showed that, only 3.75% disabled woman who got education opportunity have proceeded up to university level education. Another study (Babu, 2003), conducted on the visually impaired university students, explored that 47% of them participated in formal education, 17% in special education and 36% in integrated education. HKI and NFOWD in a study found out that merely 11% of children with disabilities have access to education. About half of them were in formal education setups devoid of systematic inclusion system, 25% of them were in integrated education system while the rest portion takes education in special education. So the literacy rate among the persons with disabilities is poor in reality. However, the study got the data of literacy rate quite higher, even greater than the national average – about 81%. This is because of the selection of the samples surveyed in the study. The study surveyed the privileged and mostly educated PWDs to get reasonably clear idea about the accessibility condition. About 56.7% of them participated in general/formal education system while 13.34% persons took education in special curriculum with special education system and the rest amount either has been generated as missing value or they have preliminary education only.

Accessibility to education and problems of accessing education varies depending on the system i.e. general or special. Problems in general education for physically challenged people

are numerous, which are both physical and non-physical as well. Physical obstacles make inaccessible education to the physically handicapped while education materials are hindrance for sight and hearing impairments. Problems in accessing general education for physically challenged people is given in the following table –

Table 5.1 Problems in Accessing General Education for Sight Impairment

<i>Problems in accessing general education</i>	<i>Responses</i>	<i>% of response</i>
No reader	17	14.78
Expensive brail materials	31	26.96
Unavailability of books	21	18.26
No such help form NGOs	25	21.74
Similar syllabus is maintained which create problem	21	18.26
Total	115	100

Table 5.2 Problems in Accessing General Education for Hearing and Speech Impairment

<i>Problems in accessing general education</i>	<i>Responses</i>	<i>% of response</i>
No directional sign	35	43.21
No such help form NGOs	25	30.86
Similar syllabus is maintained which create problem	21	25.93
Total	81	100

Table 5.3 Problems in Accessing General Education for Physically Handicapped

<i>Problems in accessing general education</i>	<i>Responses</i>	<i>% of response</i>
No ramps in education building that obstacles in movement	34	29.82
Inaccessible class rooms	34	29.82
No such help form NGOs	25	21.93
Similar syllabus is maintained which create problem	21	18.42
Total	218	100

Source: Field Survey, 2006

Unavailability of Brail books (18.26%) are very common problem in accessing education for persons with sight impairment. About 26.96% of the respondents who are sight impaired told that, they are to buy expensive Brail materials like paper, books (though unavailable in most cases) etc. Inaccessible building design is crucial for persons with physical and hearing impairments. About 29.82% of the physically impaired responses are concerned of non-availability of ramps in education building. The same percent of the responses also focused on inaccessible class rooms as well in educational institution. About 43.21% responses of the speech and hearing impaired respondents showed the absence of directional sign with

international symbol of activities and facilities. Similar education curriculum (general and special) is found as a barrier to access education effectively for all types of persons with disabilities.

In addressing problems of special education all the respondents are equally vibrant about the three problems mentioned in the table below –

Table 5.4 Problems in Accessing Special Education

<i>Problems in accessing special education</i>	<i>Frequency</i>	<i>Percent (%)</i>
Expensive education materials	42	33.33
Lack of trained teacher	42	33.33
Unavailability of educational materials	42	33.33
<i>Total responses</i>	<i>129</i>	<i>100.0</i>

Source: Field Survey, 2006

Expensive education materials including their unavailability and lack of trained teacher are the problems of special education. All the problems hold equal percent 33.33% each. The rest respondents did not answer about the matter.

5.2.2 Accessibility to Health

Bangladesh has achieved some success in health sector during last few decades. Life expectancy increased from 44 to 64 during the period 1970 to 2005. The rate of under-5 mortality in 1990 was 149 which went down to 73 in 2005 per thousand (UNICEF, 2006). Still thousands of people are deprived of basic health services. Especially, disabled people and destitute are continuously and systematically discriminated from getting health facilities. There are two major problems in getting regular health services – firstly, problem of expensive medicine (32.6%) and secondly, expensive assistive devices (67.4%). It has to be noted here that, physically disabled and hearing impaired persons showed their concern for assistive devices highly.

Table 5.5 Problems in Getting Health Services

<i>Problems in getting health services</i>	<i>Frequency</i>	<i>Percent (%)</i>
Expensive medicine	42	32.6
Expensive assistive device	87	67.4
<i>Total responses</i>	<i>129</i>	<i>100.0</i>

Source: Field Survey, 2006

The study explored that, about 59.4% respondents require at least one sort of any regular health services or assistive devices run their daily life properly. Among them, 22.66% respondents are in need of various types of tablets and antibiotic, 29.69% are in need of

hearing aid who are hearing impaired. The table below shows required regular health services-

Table 5.6 Regular Health Services Required

<i>Regular health service required</i>	<i>Frequency</i>	<i>Percent (%)</i>
Eye dropper	7	5.47
Tablet/antibiotic	29	22.66
Injection	5	3.91
Crutch	29	22.66
Hearing aid	38	29.69
Wheel chair	20	15.63
Total responses	128	100.0

Source: Field Survey, 2006

However, there are customary causes of disability among the respondents found in the study. About half of the respondents fallen in disability from the beginning of their lives – by birth. Different types of accidents like road, burning etc. caused about 21% disability which has been occurred mostly physical disability. Causes of disability found in the study are shown in the following table.

Table 5.7 Causes of Disability

<i>Causes of disability</i>	<i>Frequency</i>	<i>Percent (%)</i>
Lack of proper treatment	18	12.0
Accident	32	21.3
Lack of nutrition	22	14.7
Liberation war	11	7.3
By birth	67	44.7
Total	150	100.0

Source: Field Survey, 2006

It was also found that, lack of proper treatment and lack of nutrition also causes disability. The ratios are 12% and 14.7% respectively. It must be remembered here that, disability was not entertained in those families at all.

The study showed that, in 66% cases, families of the victims tried hard to make them fit but failed. About 11% respondents told that, due to poverty their family could not take any effective action against disability.

Table 5.8 Assistance Received from the Family to Combat against Disability

<i>Types of assistance</i>	<i>Frequency</i>	<i>Percent (%)</i>
Family tried to recover, spent money but failed	99	66.0
No assistance due to poverty	17	11.3
Lack of awareness and hence no assistance	25	16.7
Missing/NA	9	6.0
Total	150	100.0

Source: Field Survey, 2006

There was lack of awareness of disability and its consequences in the family. This unawareness leads the family not taking any action and hence the person was affected by disability. Lack of awareness causes about 16.7% of disabilities among the respondents.

5.2.3 Accessibility to Employment Opportunity

The unemployment rate in the country is 4.3% (Bangladesh Economic Review, 2003) for persons aged 15 years and over. Unfortunately, 25.40% of them are educated but unemployed. This scenario exerts that; the employment condition of PWDs would be difficult. PWDs can hardly be seen in employment sector. They are basically found in those organizations that has programs/projects on disability. One study showed that, there are 72 non-government organizations working for the PWDs in Dhaka, though Dhaka is not the only working area coverage of these organizations. However, there are only 221 (6.29%) staffs those are physically challenged against 3514 fit staffs in these organizations. Among the staffs with disability, 32.7% are female and the rest 67.3% are male (NFOWD & Action Aid, 2002). And there is no statistics in the government that how many physically challenged people are serving the nation under government service. Of course, recently government took decision to reserve 1% quota in Bangladesh Civil Service (BCS) for PWDs. There is also 10% quota for orphans and PWDs in 3rd & 4th Class employment of the government.

However, the study was conducted on physically challenged people residing in Dhaka only. The study explored that, about 75% of the respondents have some kind of classified jobs i.e. teaching, business, service, student etc. But it was not an easy task to avail the jobs. About 45% of the employed respondents face at least one type of problem in getting the jobs. The problems are various in natures. Among the responses, the highest percentage (27.70%) belong the idea that, people showed their doubts about disabled peoples' ability and was discouraged. But they got job and doing well there. In 24.32% cases, employers of these employed respondents were not interested to offer job at the beginning. Those, who are self-employed, told that they are in problem of getting credit facilities for starting the job. Another

study (HKI & NFOWD, 2005) showed that, about 70% respondents are dissatisfied in accessing credit and capital. Inaccessible built environment also leads to inaccessible jobs for persons with disabilities. The Table 5.9 shows the problems in getting job at a glance –

Table 5.9 Problems in Getting Job

<i>Problems in getting job</i>	<i>Frequency</i>	<i>Percent (%)</i>
Employee was not interested to employ at first due to disability	36	24.32
Employee wanted to pay less amount of money	14	9.46
People doubts about the ability and discouraged	41	27.70
Adequate credit facility is not available	28	18.92
Others	29	19.59
<i>Total</i>	<i>148</i>	<i>100.0</i>

Source: Field Survey, 2006

5.2.4 Accessibility to Built Environment

Social, psychological and physical barriers make all types of services and facilities inaccessible to the disabled people (Venter et.al., 2002). It has been revealed that accessibility to education, accessibility to employment opportunity and accessibility to health are very much dependent on the accessibility to built structures. Both from the observation and questionnaire survey, the accessibility condition was investigated in the research. In the observation method, the study mainly focused on the entrances, ramps, lifts, floor materials, directional signs etc. And as per the respondents are concerned, this study pointed out PWDs' movement pattern concentrating from places to go outside, transport modes, problems in roads and to the built structures of any kind. However, the findings have been arranged in two sections, i.e. 'accessibility to built structures' and 'accessibility to transport'.

5.2.4.1 Accessibility to Built Structures

Shopping complexes

Dhaka is now a city of shopping complexes. In last 10 years, a huge number of shopping complexes with modern architectural design changed the cityscape of Dhaka. Checklist survey/observation was conducted on 10 shopping complexes located different parts of the city. It was found that, there were no shopping malls/complexes having entry ramps, directional signs etc. mentioned in the Table 5.10 is evident from the survey that disability issue was not considered in the design of these buildings.

In case of floor materials the study explored that, there was only one shopping complex having mosaic floor. About 90% of surveyed shopping complexes' floor is covered by tiles

which are slippery and hence dangerous for children, aged people and obviously for PWDs (Table 5.11).

The study found that, Gate-1 and Gate-2 of *Dhaka New Market* have ramps but not in actual standard. Gate number 3 is of with stairs which is not accessible for wheel chair users. There is no directional sign with international symbol in a visible site for persons with speech and or hearing impairments. There are high stairs in the New Market Mosque, which is totally inaccessible for physically disabled people, especially wheel chair users. The floor materials of the front places of shops are non-slip in most cases.

On the other hand, both the primary entrances of *Rapa Plaza*, one of the renowned shopping complexes in Dhaka, are inaccessible for wheel chair users. The floor materials used in this complex is troublesome not only for the physically challenged people but also it is dangerous for aged people and children. There are directional signs with international symbol for toilets and bathrooms. There is escalator which creates discomfort for the sight impaired people. Fortunately, there are lifts with brails for sight impaired persons in Rapa Plaza.

Accessibility to government & private buildings

Government buildings have certain physical characteristics mostly of which do not match with the standard of accessibility for PWDs. Five government buildings including *Bangladesh Secretariat* and *Planning Commission Campus* at Sher-e-Bangla Nagar have been surveyed. The Table 5.10 shows that government offices and buildings are completely inaccessible for the PWDs in terms of ramps and directional signs. But floors of all the government buildings are found made with mosaic which is danger free and hence accessible for physically challenged people (Table 5.11).

It is to be mentioned here that, all the buildings except the number 6 Bhaban (building) of the *Bangladesh Secretariat* are inaccessible for wheel chair users. There is one lift which is reserved for PWDs there is also small ramps for the physically handicapped in that building.

Planning Commission Campus, situated in Sher-e-Bangla Nagar, in front of China-Bangladesh Friendship Conference Center, constituted by Planning Commission, Election Commission, Ministry of Planning, PWD Office – Circle 3, Janata Bank and a Mosque with 18 numbers of blocks. Each block is of three-storied. Primary entrances of every building are

inaccessible for wheel chair users. There is no lift to go upward, hence the upper floors also inaccessible to them. There are good directional signs of locations of buildings in the streets and outward of the building. Many of the blocks are of insufficient light and air circulation system. All the blocks have non-slip floor materials.

Apart from the government building and structures, eight private office buildings have been surveyed in the study. It was found that only two buildings representing 33.34% have accessible ramps for the wheel chair users. The buildings are Grameen Bank Bhaban (Mirpur, Dhaka) and ASA Tower (Shyamoli, Dhaka). Both the two building have ramps at the main entrances with international standard slope (Table 5.10). About 62.50% private buildings have mosaic floors while the rest have tiles floors surveyed in the study (Table 5.11).

Accessibility to educational institutions

The accessibility condition in educational institution is very poor found in the study. No buildings having any facilities for the persons with disabilities. But still few students (basically sight impaired) are studying there particularly in Dhaka University. The study has found out that, 90% of the educational institutions having mosaic floors which are comparatively accessible to built environment (Table 5.10).

The example of *Dhaka University* can be a good representation of physically inaccessible educational institution. There are a good number of students with sight impairment and physically handicapped in Dhaka University, no wheel chair users found in the study. None of the buildings, encompassing different departments, including libraries, canteen etc. is accessible to wheel chair users. There are no directional signs of the important buildings particularly helpful for speech and hearing impairments. Of course, the buildings of Dhaka University are of non-slip floor materials. There are ramps in the halls but not for the wheel chair users but for carrying motorcycle.

Bangladesh University of Engineering and Technology (*BUET*), on the other hand, though the prime institution of producing engineers of different subjects, planners and architects who are playing important role in physical development of the country; the primary entrances of no building are accessible particularly to physically disabled people. Of course, there are lifts with brail language in Civil Building, EME Building, Planning Building, Architecture

Building and Library. Floor materials of all the building of BUET are non-slip. Condition of directional sign in the campus is not good. There are some directions in front of buildings.

Table 5.10 Facilities for Physically Challenged People in the Surveyed Buildings

Built structure	Item	Frequency				Total	
		Yes		No		Nos.	%
		Nos.	%	Nos.	%		
Shopping Complexes	Presence of ramp for wheelchair users	-	-	10	100	10	100
	Presence of sign language for hearing impairments	-	-	10	100	10	100
	Presence of sign language for speech impairments	-	-	10	100	10	100
	Presence of sign language for sight impairments	-	-	10	100	10	100
Government Buildings	Presence of ramp for wheelchair users	-	-	5	100	5	100
	Presence of sign language for hearing impairments	-	-	5	100	5	100
	Presence of sign language for speech impairments	-	-	5	100	5	100
	Presence of sign language for sight impairments	-	-	5	100	5	100
Private Buildings	Presence of ramp for wheelchair users	2	33.34	6	67.66	8	100
	Presence of sign language for hearing impairments	-	-	8	100	8	100
	Presence of sign language for speech impairments	-	-	8	100	8	100
	Presence of sign language for sight impairments	-	-	8	100	8	100
Educational Institutions	Presence of ramp for wheelchair users	-	-	10	100	10	100
	Presence of sign language for hearing impairments	-	-	10	100	10	100
	Presence of sign language for speech impairments	-	-	10	100	10	100
	Presence of sign language for sight impairments	-	-	10	100	10	100
Health Institutions	Presence of ramp for wheelchair users	6	66.67	3	33.33	9	100
	Presence of sign language for hearing impairments	6	66.67	3	33.33	9	100
	Presence of sign language for speech impairments	6	66.67	3	33.33	9	100
	Presence of sign language for sight impairments	-	-	9	100	9	100

Built structure	Item	Frequency				Total	
		Yes		No			
		Nos.	%	Nos.	%	Nos.	%
Parks	Facility for physically challenged people to enter with	0	7	7	0	100	100
	Possible movement of a physically challenged people freely in the park	0	7	7	0	100	100
Theaters	Facility for physically challenged people to enter with?	2	6	8	25	75	100
	Seating provision for physically challenged people	1	7	8	12.5	87.5	100

Source: Field Survey, 2006

Table 5.11 Floor Materials used in Built Structures

Built structures	Floor materials	Frequency	Percent (%)
Shopping Complexes	Tiles	9	90
	Mosaic	1	10
	Brick	-	-
	Total	10	100
Government Buildings	Tiles	-	-
	Mosaic	5	100
	Brick	-	-
	Total	5	100
Private Buildings	Tiles	3	37.50
	Mosaic	5	62.50
	Brick	-	-
	Total	8	100
Health Institutions	Tiles	3	33.33
	Mosaic	6	66.67
	Brick	-	-
	Total	9	100

Source: Field Survey, 2006

Accessibility to health institutions

To know the accessibility condition nine health institutions, both from government and private sector, were surveyed in the study. The result shows that they are moderately accessible to the PWDs. But unfortunately, there were no facilities found for the sight impaired people in these health institutions (Table 5.10). About 66.67% health institutions were found with mosaic floors, while the rest were of tile floors. All the institutions having tile floors are of private sector health institution (Table 5.11).

The condition of *Dhaka Medical College Hospital* (DMCH) can be a good example regarding accessibility to health institutions. Like any other standard hospitals, DMCH is accessible to the physically disabled due to having ramps with appropriate standard. There are directional signs inside the hospital, though sometime the design of it can make the fit people hopeless and ambiguous. In some of the blocks/wards, light and air circulation seems bad.

Among the health institutions and even the buildings of all types, there is one exception found in the study. That is, the building of Centre for Rehabilitation of Paralyzed – CRP located in Mirpur-14, Dhaka. The building is perfectly designed for especially physically handicapped people. All the physical services i.e. ramp, lifts, toilets, chair-tables, accessories in toilets, wash basins etc. are accessible to PWDs

Accessibility to parks

Dhaka city is lack of adequate number of parks as compared to its population. The situation for PWDs is subsequently critical. It was found in the study that, there is no facility for the physically challenged people to enter into the parks (Table 5.10). Even, they fell in problem if anybody succeeded to reach there (Table 5.12).

Table 5.12 Problems Inside the Park

Item	Responses					
	Frequency			Percent		
	Yes	No	Total	Yes	No	Total
Walkway/street is full of cracks, not smooth	6	1	7	85.71	14.29	100
Wheel chair can not be moved easily	4	3	7	52.14	47.85	100
Lack of directional signs	4	3	7	57.14	42.85	100
Street vendors create problem	4	3	7	57.14	42.85	100
Congestion	3	4	7	42.85	57.14	100

Source: Field Survey, 2006

Example of *Dhaka Shishu Park* could be the cited here. The main gate of it is inaccessible to wheel chair users, though the other one is accessible which is mainly used for transport purposes. There is sufficient information in front gate of the park, which is very important for persons with speech and hearing impairments. But for the persons with sight impairment, there is no option of getting information by their own. Almost all the rides are inaccessible to the persons with sight and physical impairments.

Same thing can be applied for *Dhanmondi Lake*. All the gates of Dhanmondi Lake are inaccessible to physically disabled as found while conducting study. Off-course one gate is designed for PWDs. Walkways inside the lake are very often full of cracks and have been broken and hence not comfortable for the physically challenged people. If any wheel chair user can enter into the area, through some open spaces, s/he can not move due to not having any provision for them.

Accessibility to play grounds

Six playgrounds have been surveyed in the study. All the recognized playgrounds especially Dhaka Stadium, Mirpur Stadium, Bhasani Hockey Stadium are inaccessible to wheel chair users. Though sight impaired people do not have any function in these structures, speech and hearing impaired people needs directional signs, markers to avail the facilities which are not present in the playgrounds of Dhaka. On the other hand, National Women Sports Complex is somewhat accessible for the PWDs. But there is also seat problem for the persons with disabilities.

Accessibility to theaters

Eight theaters or recreational establishments have been surveyed in the study. About 75% of the respondents told that they can not access theaters/recreational activities. There was also lack of seating provisions for them in theaters (87.5%).

Shyamoly Cinema Hall (Shyamoly) and Balaka Cinema Hall (New Market); there are no ramps in primary entrances and hence are not accessible for physically disabled. If any one can get inside, s/he had to take seat in front rows which are not better to enjoy movies. Walkways between the columns are also not accessible for physically handicapped. Floor materials of the halls are non-slip.

Mohila Samity, Dhaka; primary entrance is not accessible, as there is no ramps. The floor is of non-slip materials.

5.2.4.2 Mobility Pattern of Physically Challenged People

It was found in the study that, most of the effective traveling of PWDs is towards shopping (28.32%). About 13.99% of outside movement is for official purposes while 7.69% is for education and 3.15% is for business purposes. Of course, 37.41% of the total traveling

belongs to other purposes that includes rounding hither and thither or going to relatives'/friends' house etc.

Table 5.13 Mobility Pattern of PWD

Places to go outside usually	Frequency	Percent (%)
University/School	22	7.69
Shopping	81	28.32
Street begging	16	5.59
Selling goods	11	3.85
Office	40	13.99
Business	9	3.15
Others	107	37.41
Total	286	100.00

Source: Field Survey, 2006

Problems of accessing to the building have also been sought out by the respondents in the study. According to 70.67% respondents slip floor materials is the main problem in accessing buildings, followed by inaccessible primary entrances of the building (63.33%). About 48% of the respondents told that, absence of any directional sign with international symbol made the building inaccessible to the physically challenged people especially to persons with hearing and speech impairments. Absence of ramps and ramps without any standard are also creating problem for accessing building. The ratio belongs to 42.86% and 59.18% respectively.

Table 5.14 Problems in Accessing Building

Disability type	Problems Faced in Accessing Building	Responses					
		Frequency			Percent		
		Yes	No*	Total	Yes	No*	Total
Sight impairment	No lift but escalators	23	30	53	43.40	56.60	100
	No sign language in the lift	20	33	53	37.74	62.26	100
Physical impaired	No ramp	21	28	49	42.86	57.14	100
	Ramp is available but not in actual standard	29	20	49	59.18	40.82	100
Common	Slip floor material	106	44	150	70.67	29.33	100
	No specific direction with international symbol	72	78	150	48.00	52.00	100
	Primary entrance is not accessible	95	55	150	63.33	36.67	100
	Toilet is not accessible to blind/physically impaired people	58	92	150	38.67	61.33	100

Source: Field Survey, 2006

*Not answered

5.2.4.3 Accessibility to Transportation

The study found that, in most of the cases (about 34.15%), transport mode used for going outside by physically challenged people is rickshaw followed by walking (27.24%). Only 3.25% of the respondents have private cars for moving outside. The table below shows the using pattern of transport mode –

Table 5.15 Modes of Transport in General

Mode of transport in general	Frequency	Percent (%)
Rickshaw	84	34.15
CNG/Taxi	53	21.54
Bus	34	13.82
Walking	67	27.24
Private car	8	3.25
Total	246	100.00

Source: Field Survey, 2006

There are so many problems in accessing the transport mode both from physical and non-physical point of view. Very often, according to 41.8% respondents, it is found that the pullers demand high fare/rent to make ride for them. In about 30% cases, the pullers do not want to take the physically challenged people in their vehicles.

Table 5.16 Problems Faced During Movement of PWDs

Problems Faced during movement	Frequency	Percent (%)
Pullers does not want to carry	93	29.90
Demand high fare	130	41.80
Is not accessible (such as narrow gate, narrow corridor, uneven gate and the footpath)	88	28.30
Total	311	100.00

Source: Field Survey, 2006

In addition, about 28.30% of the respondents (mostly physically disabled) told that the transport modes are not accessible.

Walking often is more hazardous for PWDs. The table with multiple response statistics shows that, open manhole in the streets and footpaths are the most vulnerable problem (61.33%) for all type of disability. Cracked streets (60.00%) were also important barrier for accessing road. Persons with sight and physical impairment were mostly vibrant regarding the matter.

Table 5.17 Problems Faced in Accessing Road

Disability type	Problems Faced in Accessing Road	Responses					
		Frequency			Percent		
		Yes	No*	Total	Yes	No	Total
Sight impairment	No street sign for blind people in stoppage	16	37	53	30.19	69.81	100
	No alarm bell for road crossing for blind people	38	15	53	71.70	28.30	100
Speech and impairment	No street sign for speech/hearing impaired people in stoppage	30	7	37	81.08	18.92	100
	No street sign for speech/hearing impaired people for road crossing	29	8	37	78.38	21.62	100
Physical impaired	Not appropriate (leveled, smooth, non-slip) for using wheel chair	40	9	49	81.63	18.37	100
Common	Street is full of cracks	90	60	150	60.00	40.00	100
	Open manhole	92	58	150	61.33	38.67	100
	Street level and motor vehicle gate is uneven	67	83	150	44.67	55.33	100

Source: Field Survey, 2006

*Not answered

There is no street sign with international standard symbol for speech and hearing impaired persons in stoppage (81.08%), for road crossing (78.38%) in Dhaka. About 44.67% respondent told that, street level and level of gates of vehicles are uneven and hence the vehicles are not accessible. Those, who are sight impaired, told that, there is no alarm bell system for crossing the road which belongs to 71.70% of the total responded.

However, accessibility to bus terminal, railway station and piers & jetties were found through observation method and described in the following paragraphs.

Accessibility to bus terminal

No easy entering found in bus terminals. In the study, three bus terminals were surveyed. Gabtoli Bus Terminal can be a better example. There are no chances for sight impaired and physically disabled to avail services in Gabtoli Bus Terminal if any one does not help her/him. In fact, there are no formal directional signs in the terminal except the billboards of the different bus services. The stair of the counters and height of the gates of buses are not same. Hence, it is not accessible for the wheel chair users. The size of the gates is of lower size than the standard for entering wheel chair found in the study.

Accessibility to railway station

Only Kamlapur Railway Station has been surveyed under the study. It was found in the study that, there are three main entrances as well as three primary entrances in Kamlapur Railway Station for the passengers (including VIP gate). All the primary entrances are without any type of ramps. That means they are not accessible to wheel chair users. There are good numbers of ticket counters in each part of two entrances. In the first entrance, there is a counter reserved for physically challenged people. The height of the booth seems accessible to wheel chair users but the width between two side rallying is not appropriate for all types of wheel chairs.

On the other hand, though the floor of ticket counter and surroundings are of slippery materials, the platform is of non-slippery and quiet safe for physically challenged and aged people. But the gates of the coaches of trains are not leveled with the platform and hence not accessible to wheel chair users. Some one need to assist the PWDs if they wish to get enter into. Of course at present, the authority decided to provide access ramps for PWDs to get into the coach.

The condition of symbol and directional signs in the station is somewhat better. Unfortunately, there is no label of coach number in the platform but in the gate of the coaches. Hence, a person with hearing and speech impairment fell in difficulty while accessing the coach. It is a problem for the fit people also.

Accessibility to piers and jetties

Only the Sadarghat Launch Terminal was investigated under the study. All the gates, having no ramps, are primarily inaccessible for physically disabled, particularly for wheel chair users. The jetties are undulated; walkways inside the platoon are not suitable for physically challenged people. The system to get into the launce is not appropriate. Only a piece of plain wood is used that can not be used comfortably even by the fit people. There is absence of international directional signs and symbols of accessibility in the terminal for PWDs.

Accessibility to streets and footpaths

All the streets and footpaths of Dhaka city are inaccessible to PWDs. It is to be noted here that, four arterial roads have been surveyed to know the accessibility scenario. No streets found with international symbol of accessibility for wheel chair users, hearing or speech and

sight impairments. Footpaths found in the survey were full of cracks, not leveled, and with open manholes. It is totally inaccessible for a wheel chair user to take a ride on footpath but some streets. Such type of footpath is also inaccessible to sight impaired people.

So one can easily understand that, in case of accessing education, health facility and employment opportunity there are problem of both policies and building designs of the respective institutions. Problem varies depending on the types of disability and the subject matter on which accessibility condition is investigated into. Physically challenged people can not enjoy games and events in the play grounds; they can not go to the parks. Bus terminal, railway station, piers and jetties all are inaccessible to them. They can not move freely in the streets and footpaths. In fact, total surrounding built environment is almost inaccessible to the physically challenged people.

5.3 Case Studies of Physically Challenged People

5.3.1 Case Study: Physically Handicapped

Name: Ansar Ali

Age: 30

Mr. Ansar is a wheel chair user. He was affected by Polio at his 3 years of age. His family failed to recover the polio for which his left leg got shortened and squeezed. When Mr. Ansar was just 9, he started to use wheel chair. The chairs he used so far were donated by various social welfare organizations/NGOs.

Mr. Ansar is married and has two sons of 7 years and 5 years of age respectively. All of his family members are out of any kind of disabilities. He is a computer operator in a NGO since 1999. He earns about Tk.7000 per month.

His feeling of inaccessibility in fact starts with the awakening from sleep. "Toilets and wash basins are not so accessible even in my house; I can not sit in the high commode; wheel chair can not be taken to the toilet; wash basins are of above standard height"- Mr. Ansar said. Of course, dining table at home is standard height and Mr. Ansar can use it easily with sitting in the wheel chair – as he mentioned.

When Mr. Ansar goes out regularly for office, he faces the most critical problem. "Streets are full of cracks, there is open manhole and there are non-smooth streets" - he mentioned. He

had to avail rickshaw usually. But he can not access it independently as he said. Though, CNG is comfortable, very often CNG drivers take them ride. He pointed out that, none of the vehicles are designed according to the requirement of physically handicapped or wheel chair user.

His office is in the first floor and there is ramp to access into. Office furniture are quite accessible to him He told that, all other buildings including shopping complexes are without ramps and hence inaccessible. Mr. Ansar told that, he never enjoyed any theater/film in the theater hall / cinema hall. "I know that, there is accessibility problem" - he added.

5.3.2 Case Study: Sight Impaired

Name: Jarina Akhter

Age: 19

Jarina Akhter is a 2nd year student of Dhaka University of Social Science Department. Jarina is single. She was affected by typhoid at her 4 years of age and got sight impaired. She can move freely only with the help of white cane.

Jarina thought that, though in the family, she is in good position, the society does not recognize her as expected. Sometimes society ignores the sight impaired people. Society even does not respect their dignities and capabilities as well.

As earlier said, Jarina is a student of Dhaka University. She came through normal education system which was very tough for her. She had to collect the brail books or translated brail papers of course books. She had to even take help from the reader/interpreters in the examination. According to Jarina, there are many problems in getting education for a sight impaired student i.e. lack of brail books, expensive brail materials, lack of readers/interpreters, similar syllabus for both fit and sight impaired student etc. These problems can be mitigated by making adequate number brail press, so that brail books/papers can be produced/bought cheap. Syllabus can be redesigned for sight impaired student as said by Jarina.

She stays in the University Residential Hall. But for various purposes she goes outside the hall 3/4 times a day. In the University she walks on foot with the help of white cane. But in the case of outside the university, she has to use rickshaw/CNG. In the University campus,

there are little problems of accessing the class rooms. But co-students help her lot in overcoming those problems. "But outside university movement is quite difficult" stated by Jarina.

Jarina said that, very often rickshaw puller demand high fare and does not want to carry the disabled people. On the other hand, cracked streets, open manhole, absence of talking system in crossing the road, no sign in the bus stoppages etc. are the main problems in roads & streets of Dhaka for the sight impaired people. In fact, the situation is almost same all-around the country.

Jarina also pointed out that, almost all government & private buildings are inaccessible for sight impaired people. In shopping complexes there are escalators but lifts. If lifts are available, they are without brail sign. There is also slip floor materials found in most private buildings and shopping complexes. "It seems outside environment is completely inaccessible to me" -told Jarina.

Jarina raised some mitigative measures for ensuring accessibility other than some direct actions like using brail in all lifts, avoiding slip floor materials, using alarm bell for crossing the roads etc. She addressed that mindset of the people must be changed and made friendly to the physically challenged persons. She firmly believes that only the change of the mindset of the people towards disability can ensure accessible built and socio-cultural environment for physically challenged people.

5.3.3 Case Study: Speech and Hearing Impaired

Name: Rifat Kaisar Roni

Age: 28

Rifat has speech and hearing impairment since birth. He is the only child of his parents. He is married and has a daughter of one and half years of age. His wife and daughter both are fit people. Rifat has a Diploma in computer science equivalent to the Secondary School Certificate Examination. He is employed in a private firm. He earns about Tk.3500 per month.

According to his statement, he faced numerous problems in getting the job. "They did not want to recruit me for the post at first" - he told. Then he had to convince them that he performs as a fit people. Moreover, HICARE persuade to the organization stating that Rifat is eligible in computer work though he is speech and hearing impaired.

Rifat holds better position in his family. His family recognized him, in decision making for various purposes as he said. He does not require any kind of medical treatment but assistive device i.e. hearing aid. It helps him, in doing office job without any hazard and effectively.

Rifat went through special education system that means school for speech and hearing impaired. According to him, the problems of special education system are basically lack of trained teachers. As poor people have more chance to be impaired, in many cases education materials appears expensive to afford for them. On the other hand, students who are in general education system face high price of hearing aid that hampers their education.

There are lot of accessibility issues for speech and hearing impaired people as specified by Rifat. He pointed out that in the stoppages and crossing the roads, there are no street sign. Moreover, in many buildings, the condition of directional signs is very poor.

To improve the condition in all the aspects, Rifat thinks that, the most important action is to change the mindset of the people towards disabled people. He thinks that, introducing better street sign system can make accessible road, appropriate directional sign installation can make the buildings user friendly. The price of hearing aid should also be lessened in ensuring accessibility at many levels.

5.4 Analysis of Outputs from Questionnaire Survey, Checklist and Case Studies

The positions of PWD in the family and the society as found in above discussion are mixed. Family support played an important role in establishing themselves. But sometimes society could not trust on them. They viewed disabled people negatively and very often, they did not co-operate them.

But these case studies clearly explored that built environment in particular is almost inaccessible to the physically challenged people. Transport modes are inaccessible, transport workers do not co-operate to the PWD. Streets and footpaths are totally inaccessible for the physically challenged people. Buildings are far from the accessibility and accessible standard.

Education - physically and ideally is out of the disabled people. Education institutions are physically inaccessible, syllabus is sometimes exclusionary in nature, and there is lack of supportive education materials for those who require special attention.

Organizational occupation is very far from them. Those who succeeded to get job faced some unwanted problems - people doubted their ability; want to pay less etc. Alternatively, with the passage of time PWD proved them capable as the normal people. Those who are in need of medical treatment stated that supportive medicines and assistive devices appear out of reach day by day.

So these case studies are the reflection of inaccessibility, are the reflection of issues that need attention from development workers and policy makers. Off course, there are some important recommendations made by the interviewed people. Those have been incorporated in the policy recommendations of the research in Chapter 6. However, one can easily summarize the inaccessibility issues explored in case studies as follows –

Table 5.18 Areas where Inaccessibility was Found

Kind of disability		Areas where inaccessibility was found				
		Built Environment	Transport	Education	Employment	Health
1	Physically handicapped	- No ramps/ramps without any standard measurement - No lifts but escalators - Inaccessible toilet arrangements - Slip floor material	- Design of motor vehicle including entrance - Open manhole - Crack in the streets and non-smooth streets - Rickshaw puller/CNG/Taxi drivers do not want to take ride - High fare - Crowds and illegal establishments in the streets	- No ramps in education building - Inaccessible class rooms - Inaccessible design of the chairs/benches	- Disinterest among the employee not to offer job - Less amount of remuneration - Doubts about the ability of the PWDs - Lack of credit facility	- Expensive medicine - Expensive assistive device
2	Speech and hearing impaired	No specific directions with international symbol	- Absence of street sign - Rickshaw puller/CNG/Taxi drivers do not want to take ride	- Lack of trained teacher - Similar syllabus		
3	Sight impaired	- Slip floor material - No sign language in the lift - No lifts but escalators - Inaccessible toilet arrangements	- Open manhole - Absence of street sign for road crossing or stoppages - Crack in the streets and non-smooth streets - No alarm bell for road crossing - Rickshaw puller/CNG/Taxi drivers do not want to take ride	- Expensive education materials - Lack of trained teacher - Unavailability of educational materials - No reader - Similar syllabus		

5.5 Suggestions and Opinions from Physically Challenged People

The respondents pointed out so many steps and actions, which they believe, if taken can bring good result to them. Particularly, the accessibility condition will be improved. They had some classified and well articulated expectations to overcome the problems in all the spheres of education, health, economic opportunities and built structures. Thus the facilities can be made accessible and suitable for PWDs.

5.5.1 Ways to Address Education Problem

It was found that, 48.67% of the respondents urged to make assistive devices/medicines cheap. Trained teachers should be engaged for both general and special education system – it is the consent of about 42.00% respondents. About 58.49% of the sight impaired respondents pointed out that, Brail book/Brail paper should be made available and at reasonable cost. About 56.60% sight impaired respondents recommended for recorded books.

Table 5.19 Suggestions of PWDs to Address Education Problem

<i>Disability type</i>	<i>Ways to resolve education problem</i>	<i>Responses</i>					
		<i>Frequency</i>			<i>Percent</i>		
		<i>Yes</i>	<i>No*</i>	<i>Total</i>	<i>Yes</i>	<i>No*</i>	<i>Total</i>
Sight impairment	Make brail book/paper available and cheap	31	22	53	58.49	41.51	100
	Make available recorded book	30	23	53	56.60	43.40	100
Physical impaired	Ramps should be provided in education building	43	6	49	87.76	12.24	100
Common	Trained teachers should be managed	63	87	150	42.00	58.00	100
	Appropriate syllabus should be arranged	29	121	150	19.33	80.67	100
	NGOs should take necessary arrangements to ease the problems of disabled people	36	114	150	24.00	76.00	100
	Make assistive devices/medicine cheap	73	77	150	48.67	51.33	100
	Classroom should be made accessible	34	116	150	22.67	77.33	100

Source: Field Survey, 2006

*Not answered

Furthermore, 87.76% physical impaired respondents told that, ramps with international standard should be provided in all the education building. 24.00% of the respondents thought that, there should have effective and important NGO involvement in accessing education for

the physically challenged people. Class room (seat benches, high benches, black boards etc.) should be made accessible – this is the concern of 22.67% respondents found in the study.

5.5.2 Ways to Address Health Problems

According to 69.33% of the total respondents, government should have sufficient and effective involvement in assuring health services. About 61.33% of the respondents told that, the cost of assistive devices should be reduced drastically so that devices can be bought cheaply and the victim can manage all the problems.

Table 5.20 Ways to Address Health Problems

<i>Ways to resolve health problems</i>	<i>Responses</i>					
	<i>Frequency</i>			<i>Percent</i>		
	<i>Yes</i>	<i>No*</i>	<i>Total</i>	<i>Yes</i>	<i>No*</i>	<i>Total</i>
Govt. should take necessary actions	104	46	150	69.33	30.67	100
The cost of medicine should be reduced	36	114	150	24.00	76.00	100
The cost of assistive devices should be reduced	92	58	150	61.33	38.67	100
Trained doctors and assistants should be managed	63	87	150	42.00	58.00	100
Non-government organizations may come forward to assist in health and providing assistive devices	52					
		98	150	34.67	65.33	100

Source: Field Survey, 2006

*Not answered

About 34.67% respondents think that, to resolve health related problems non-government organization should come forward to assist the physically challenged people, which may provide good result. Trained doctors and assistants should be managed for better health services to the disabled people that are consented by 42% respondents.

5.5.3 Ways to Address Problems in Economic Opportunities

The problems related to economic opportunities are very much dependent on the attitude of the people. Common people think that, disabled people can do nothing, they are unable, and they are ineffective. According to 68.67% respondents, this mindset of the people should be changed. About 38.67% of the total respondents expressed that, to change the mindset and resolve problems in accessing economic opportunities, raising awareness on disability can be a good solution.

Table 5.21 Suggestion of PWDs to Address the Problems in Getting Job

<i>Ways to resolve the problems in getting job</i>	<i>Responses</i>					
	<i>Frequency</i>			<i>Percent</i>		
	<i>Yes</i>	<i>No*</i>	<i>Total</i>	<i>Yes</i>	<i>No*</i>	<i>Total</i>
Mindset of the people should be changed	103	47	150	68.67	31.33	100
To create example so that people can not express negative attitude	63	87	150	42.00	58.00	100
Equal wage should be provided	10	140	150	6.67	93.33	100
Adequate credit facility should be made available	28	122	150	18.67	81.33	100
Raising awareness	58	92	150	38.67	61.33	100
Don't know	11	139	150	7.33	92.67	100

Source: Field Survey, 2006

*Not answered

Another important thing is that, about 42.00% respondents want to create example in their respective profession and arena so that people is attracted and made themselves positive towards disability and disabled people. About 18.67% of the respondents think that, arranging adequate credit facilities can bring positive changes in economic lives of physically challenged people.

5.5.4 To Ensure Accessible Built Environment

An accessible built environment is very much important to ensure accessible environment for the persons with disabilities. Transport modes, roads and buildings were the three components of this study, where accessibility conditions found out. Improvements of various natures also required here to make them accessible.

About 78.00% of total respondents of the total want rickshaw puller/CNG/Taxi drivers to behave well with them – they will take them for ride, they will not demand high fare from them etc. About 89.80% physical impaired respondents think that, to improve accessibility condition in transport mode, it is necessary to consider design aspects of the mode.

Table 5.22 Improvement Required in Physical Environment

Disability type	Improvement required in physical environment	Responses					
		Frequency			Percent		
		Yes	No*	Total	Yes	No*	Total
Sight impairment	Alarm bell for road crossing for sight impaired people should be provided	34	19	53	64.15	35.85	100
	Along with escalators lift with appropriate sign language should be provided	16	37	53	30.19	69.81	100
	Sign language should be provided in all the lifts	21	32	53	39.62	60.38	100
Physical impaired	Height of street level and motor vehicle gate should be adjusted so that physically challenged people easily get access into	46	3	49	93.88	6.12	100
	Motor vehicle should be made accessible	44	5	49	89.80	10.20	100
	Primary entrance should be made accessible/ Ramp with standard measurements should be provided	57	93	150	38.00	62.00	100
Common	Street sign for blind, speech/hearing impaired people in stoppages should be provided	68	82	150	45.33	54.67	100
	All manholes should be covered with leveled caps	48	102	150	32.00	68.00	100
	Rickshaw puller/CNG/Taxi drivers should be made aware about disabled people so that they behave well	117	33	150	78.00	22.00	100
	Streets should be made leveled, smooth and non-slip	79	71	150	52.67	47.33	100
	Slip floor material should be avoided	46	104	150	30.67	69.33	100
	Specific directions with international symbol should be arranged in all the buildings	55	95	150	36.67	63.33	100
	Toilet should be made accessible to blind/physically impaired people	20	130	150	13.33	86.67	100

Source: Field Survey, 2006

*Not answered

While giving suggestions about the improvement of street condition, 52.67% of the respondents told to make the streets leveled, smooth and non-slip. All manholes in the streets and footpaths should be covered with leveled caps, which is recommended by 32.00% respondents. About 93.88% physically impaired respondents think that height of street level and motor vehicle gate should be adjusted so that physically challenged people easily get access into them. According to

45.33% respondents to improve the situation in road, street sign for sight and speech/hearing impaired people in stoppages should be provided. About 64.15 % of the respondents think that alarm bell for road crossing for sight impaired people is inevitable.

In accessing the building, primary entrances should be made accessible or ramps with actual standard should be provided in all the building – commented by 38.00% physically impaired respondents. About 30.67% of the total respondents think that, slip floor materials in buildings should be avoided to make them safe especially for disabled people and children. According to 36.67% respondents, directional signs with international symbol should be arranged in all the buildings for all kind of physically challenged people. About 13.33% respondents, especially physically disabled and sight impaired also think that, toilets in various types of buildings should be made accessible in all manners of construction and standard. Areas where actions need to be taken as ‘Solution matrix’ have been given in the following page.

Table 5.23 Areas where Actions Need to be Taken: Solution Matrix

Kind of disability	Areas where actions need to be taken			
	Built Environment	Transport	Education	Employment
1 Physically handicapped	- Primary entrance should be made accessible/ Ramp with standard measurements should be provided - Slip floor material should be avoided - Toilet should be made accessible to blind impaired people	- Rickshaw puller/CNG/Taxi drivers should be made aware about disabled people so that they behave well - Motor vehicle should be made accessible - Height of street level and motor vehicle gate should be adjusted so that physically challenged people easily get access into - Streets should be made leveled, smooth and non-slip	- Ramps should be provided in education building - Make assistive devices/medicine cheap - Classroom should be made accessible - NGOs should take necessary arrangements to ease the problems of disabled people	- Govt. should take necessary actions - The cost of medicine should be reduced - The cost of assistive devices should be reduced - Trained doctors and assistants should be managed - Non-government organizations may come forward to assist in health and providing assistive devices
2 Speech and hearing impaired	Specific directions with international symbol should be arranged in all the buildings	- Rickshaw puller/CNG/Taxi drivers should be made aware about disabled people so that they behave well - Street sign for speech/hearing impaired people in stoppages should be provided	- Trained teachers should be managed - Appropriate syllabus should be arranged - Make assistive devices/medicine cheap - NGOs should take necessary arrangements to ease the problems of disabled people	- Mindset of the people should be changed - To create example so that people can not express negative attitude - Equal wage should be provided - Adequate credit facility should be made available - Raising awareness
3 Sight impaired	- Slip floor material should be avoided - Along with escalators lift with appropriate sign language should be provided - Sign language should be provided in all the lifts - Toilet should be made accessible to blind impaired people	- Rickshaw puller/CNG/Taxi drivers should be made aware about disabled people so that they behave well - All manholes should be covered with leveled caps - Street sign for blind people in stoppages should be provided - Alarm bell for road crossing for sight impaired people should be provided	- Make brail book/paper available and cheap - Trained teachers should be managed - Make available recorded book - Appropriate syllabus should be arranged - NGOs should take necessary arrangements to ease the problems of disabled people	

5.6 Evaluation of the Existing Disability Development Program in Bangladesh

The disability development movement, the form which is being seen at present days, is not a long history in Bangladesh. The scenario can be viewed from two angles. Firstly, it was not generated by the society by its own, not for an even, equal and equitable and accessible social, economical and physical environment. Rather the movement was initiated in the country as a charity function (in some cases), unfortunately as a consequence of economic opportunity of some smart persons working in development field. It is to be noted here that, government was always very reluctant to disability development movement as it to other sectors. The situation was swelled out by the inherent sluggishness of government machineries. However, the second approach, which is absolutely praiseworthy, is that development paradigm instigated by the physically challenged people themselves. Most of the non-government organizations exclusively working for the welfare of disabled people are the result of conscious and continuous efforts of some persons with disability and of some man with kind. Center for Rehabilitation of Paralyzed (CRP) is a unique example set by Vellory Taylor guardian angel to the paralysed children in the country. Off course, at present days, CRP has been getting required amount of donations from the well-off and dedicated persons of home and abroad. Center for Disability Development (CDD), Centre for Services and Information on Disability (CSID), Blind Education and Rehabilitation Development Organisation (BERDO), BODA etc. are also of same category.

As per activities of public and private institutions are concerned, private institutions deserves more credit than the government do. Private and non-government organizations have widened their activities from advocacy and awareness to giving micro credit to the persons with disabilities. Almost all the NGOs do advocacy and awareness raising activities for disability. Disability education is the working agenda of 38.89% NGOs while 68.34% private institutions give various types of medical facilities to the persons with disability. Off course, government under the Ministry of Social Welfare (MoSW) and Social Welfare Department (SWD) provide medical services, assistive devices time to time to the physically challenged people. On the other hand, many of the non-government organizations are directly related to making assistive devices and providing medical treatment. Baptist Sangha School for the Blind Girls, National Blind Welfare Association has their own Brail Press. HICARE, Society for Assistance to hearing Impaired Children (SAHIC) produce hearing aids. CRP and such other health centers are providing physiotherapy assistance. Some organizations are producing artificial limbs with cheap rate.

Government, on the other hand, has some scattered development activities for the welfare of disabled people all around the country. In providing services and facilities to the disabled people, the situation is not good enough. Though there are 64 blind education centers around the country, only 8 integrated Deaf & Dumb and Blind School has been set up since 1962. There is a skill training and rehabilitation center for physically handicapped of 85 capacity at Tongi, Gazipur. The only standard education center with medical facilities for physically challenged children is 'National Center for Special Education' located in Mirpur, Dhaka. Government gives supports to intellectually disabled through SWID-Bangladesh in 40 schools for them around the country. Moreover, national training and rehabilitation center for persons with sight impairment having capacity of 50 is under operation since 1978 at Tongi, Gazipur.

Government of Bangladesh has enacted National Policy for Disabled Persons in November 1995 and Disability Welfare Act 2001. The constitution of Bangladesh also mandates the rights and dignities of disabled people in the country. Dhaka City Building Construction Rules 2006 (DCBCR-2006) also show some guidelines to make the buildings accessible for PWDs. Rule 75 of it described the primarily physical accessibility (entry/exit, ramp/handrail & lift), commercial building, shopping complexes, health institutions, educational institutions etc. It is to be noted here that, the Rules need some more clarifications in some cases – the physically challenged people needs to be defined, mandatory use of brail button in the lift, accessible floor materials of the built environment should be ensured.

There are almost no amusement facilities i.e. parks, play grounds, theatres for the persons with disabilities in Dhaka. Non-government organizations arrange some recreational facilities occasionally.

It is to be noted here that, all the NGOs including the government institutions are regularly carrying out awareness raising activities protecting disability rights, violence against them, on effective inclusion of PWDs at all levels of social, economic and physical environment etc. Unfortunately there are some organizations found in the study that, they have very nominal presence in disability development. Their activities concentrated only awareness building occasionally and showing PWDs to earn money from the donors. Many of the respondents, found in the study were vibrant about the matter. In relation to this, it was also explored that

if real change is to achieve government should come forward primarily for disability welfare. Private and non-government organizations can influence the policy matters reasonably, but substantial change or improvement can be brought effectively by government efforts.

5.7 Demand-Supply Analysis of Selected Urban Services and Facilities for PWDs

One of the important features of this study was to show some light on analyzing the demand and supply of selected urban services and facilities. This is necessary because, it can show the remedial & prospective measures for ensuring accessibility. In the following paragraphs 'demand-supply' analysis has been discussed based on the services

5.7.1 Education/Schools

There are shortages of formal schools from where a physically challenged people can get education. The study explored that, there are only two schools for the sight impaired people which are formal in nature. One is Baptist Sangha School for the Blind Girls the capacity of which is 70 and other is national Centre for Special Education whose capacity is only 20. These two schools served only 7% of the students who are sight impaired. On the other hand NGOs working in the field of disability have also literacy program. It was found that, 15.6% of these NGOs are engaged in disability education in Dhaka.

In case of schools for hearing and speech impairment the situation is slightly better. There are four schools in Dhaka to teach them. The schools and their capacities are –

Table 5.24 Schools for Hearing and Speech Impaired Students in Dhaka

<i>Sl. No.</i>	<i>Name of Schools</i>	<i>Student Capacity</i>
1.	HICARE, Dhanmondi	100
2.	SAHIC, Mohakhali	120
3.	Deaf High School, Bijoy Nagar, Dhaka	275
4.	Integrated Pre-school for Hearing Impaired, Mohakhali	160
5.	Communication for Hearing Impaired Children	27
Total		682

Source: NFOWD, 2007

So about 34% of speech and hearing impaired students residing in Dhaka have the opportunity to get the education from formal institutions. At the same time a portion of

speech and hearing impaired people are involved with different non-government organizations and getting some sort of education.

Unfortunately, no schools were recognized for the physically handicapped. They had to take education in the mainstream formal education system.

Table 5.25 Schools for Physically Challenged People in Dhaka

Types of disability	Number of students in Dhaka	Education		Percentage of students served
		Number of schools	Capacity	
Sight impaired	1284	2	90	7.01%
Hearing/speech impaired	2011	5	682	33.90%
Physically handicapped	2081	-	-	-
Total	5376	7	772	14.40%

Source: NFOWD, 2007

So, only 14.40% of the physically challenged students can be accommodated in the formal education system in Dhaka. Compared to the national average found by HKI and NFOWD merely 11% of children with disabilities have access to education. That means about 85% of the students are left behind to access the education that lead the necessity of adequate number of educational institutions for PWDs.

5.7.2 Analysis of Employment Situation

There is 6% quota in government employment for PWDs. Moreover, 1% quota in Bangladesh Civil Service cadre has been declared by the government for people with disabilities. But no statistics found how many disabled people are employed in government sector.

Table 5.26 Number of Disabled Work Force in Dhaka City Corporation

Population of DCC	Crude disability rate/1000 in urban area	Total number of people with disabilities	School going children of total population	Prevalence rate of disability based on type** (%)				
				Sight impairments	Hearing/speech impairment	Intellectual disability	Physically handicapped	Others
5378023	4.21%	22641		14.81	23.19	19.62	24	18.38
Number of disabled children (age group 0-14)		8672	38.3%	1284	2011	1701	2081	1594
Work force in number								
Number of disabled people (14+)		13969	61.70%	2069	3239	2741	3559	2561

Source: BBS, 1991 (Calculation done by the researcher)

According to BBS-1991, the number of disabled people of 14 + age group is 13969. But it was found that, 3514 number of staffs engaged in disability development activities in different non-government (72 NGO) organizations. Among them, 221 people have some sort

of difficulties or impairments. If these active people are excluded the number of unemployed people stands –

$$= [13969 - 221]$$

$$= 13748$$

On the basis of the aforesaid statistics, a fraction of physically challenged people in Dhaka are employed. However, about 75% of the respondents are engaged in various types of jobs found in the study. So there is huge requirement of appropriate employment opportunities for the physically challenged people.

So this chapter has depicted the most important part of the research. It has illustrated the accessibility condition of the physically challenged people to the selected urban services and facilities i.e. education, health, employment opportunity and built environment. The general recommendation from the chapter can be drawn as that, the accessibility condition is very poor and need huge, logical and pro-active intervention to improve.

CHAPTER 6

Recommendations and Conclusion

CHAPTER 6

RECOMMENDATIONS AND CONCLUSION

6.1 Introduction

This concluding chapter has illustrated an independent evaluation of present disability development activities in the country based on the field survey, interviews, discussions, case studies etc. Finally, a set of policy recommendations (including a policy-activity matrix) has been attached herewith with a view to achieve an accessible environment for physically challenged people in almost all spheres of their lives with prior analysis of above mentioned solutions and recommendations

6.2 Recommendations

Disability is somewhat a recent question in development paradigm all over the world. In case of Bangladesh, it is a matter of just one or two decades in a systematic manner, though, some charity based and scattered actions were taken at past for the welfare of physically challenged people in the country. The country has lack of authentic disability information, lack of policy level focuses, and lack of organized institutional efforts etc. towards their development. In such a position, investigating accessibility of PWDs to urban services and facilities was somewhat advanced effort in disability field. And it was explored that almost every services and facilities are inaccessible due to either absence of policies or lack of any universal & accessible design standard for built environments concerned. Poor level of disability awareness is also exists blatantly in the family and the society. So recommendation in improving the accessibility condition of physically challenged people in Dhaka and the country as well requires not only policy level actions, but also changing the mindset of people should be an important criteria of the recommendations set here. Opinions of physically challenged people, views of experts working in the field of disability and professional's thoughts relating to the concerned services and facilities has played the key role here. These recommendations are arranged in the following paragraphs according to the service-facilities for convenience, accessibility conditions on which were investigated.

6.2.1 Recommendations for Accessible Education

- (a) **Observation:** 'Education for all' is the theme of National Education Policy adopted in 2000 pioneered by Ministry of Education (MoEd). But education for physically challenged people is so far the responsibilities of Ministry of Social Welfare (MoSW) and institutions associated to this ministry. So PWDs are left out

from the mainstream education development activities. As disability development is not a charity function at present, rather it is their right; responsibilities of education for PWDs should be vested to the Ministry of Education.

Different types of disabled people require different types of facilities. A sight impaired student needs Braille whereas a speech and hearing impaired requires hearing aid. Intellectually disabled students are in need of other type of medical and mental assistance. So, their education needs to be addressed with special attention along with other skill development activities.

Recommendation: *Ministry of Education should also be the responsible authority for education of PWDs. National Education Policy should have a 'sub-policy' for educating the physically challenged people considering their special requirements.*

- (b) **Observation:** Institutions run by the Government located in Dhaka can provide education to only 145 physically challenged students in total a year. At least 72 organizations (NGO and or privately owned) has been working especially on disability in Dhaka. About 15.60% of these NGOs have education program - formal and or non-formal. Average student teacher ratio for disability education is 7:1. Number of teachers including physiotherapist in only recognized government institution NCSE is 36. In non-government schools and organizations roughly 85 teachers are engaged. On the other hand, number of disabled people in Dhaka is 22,642 of which 8,672 are of age group 0-14. So there is serious shortage of educational institutions and teaching staffs in the field of disability. It needs to be justified.

Recommendation: *Number of schools for each type of disabled people should be increased justifying the demand and with maintaining international standard. Under the 'sub-policy' for educating the physically challenged people to be incorporated in National Education Policy a comprehensive study in prior to set up schools is required in that case.*

- (c) **Observation:** There exists negative attitude (83%) in educational institutions towards disabled children. It was also found that, 53% family creates obstacles in

getting education. Showing negative attitude is not only the problem of getting education, inaccessible urban services and facilities are entirely characterized with this problem. The negative attitude should be removed.

Recommendation: *Proper awareness program on disability issue, importance of their inclusion in all spheres of life should be done more and more to remove the psychological barriers of accessibility. Education curriculum at all levels should be made pro-disability within shortest possible time under a specific plan of actions.*

- (d) Syllabus in general education system is common for both disabled and fit students. As disabled students starts from one stem backward they can not compete with the fit student. Unavailable and expensive education materials (18.26% and 26.96% respectively) augment the condition. Lack of trained teachers (33.33%) is also one of the major problems of disability education in special system in Dhaka. This needs to be addressed in making education accessible to PWDs.

Recommendation: *While in general education system, syllabus especially for the sight impaired students should be made easy and level-playing with the fit students. Education materials like Brail books, papers, recorded books, computer software should be made cheap and affordable. Trained teachers should be managed in both the general and special education system. Existing teaching staffs should be given adequate training on education, skill development etc.*

- (e) **Observation:** Inaccessible building design was one of the major barriers for PWDs to education. It was found that, 94.7% educational institutions do not have any ramp or lift facilities to access the buildings. Among the physically challenged children about 29.82% responses concerned of non-availability of ramps in education building. The same percent also belong to inaccessible class rooms (i.e. difficult entrance, slip floor materials etc.) as well in educational institution. So accessible education building is pre-requisite for PWDs to access education.

Recommendation: *All the educational institutions should have accessible entrances, ramps with standard height at all levels and lifts (where applicable). Floor should not be made of slip materials. Easy entrances to the class rooms should be maintained. The whole institution should have directional signs with international symbol of activities and facilities not only for the disabled but also for the fit people.*

6.2.2 Recommendations for Accessible Health

- (a) **Observation:** About 60% respondents require at least one kind of regular health service or assistive device (i.e. wheel chair, white cane, hearing aid, crutches etc.) to perform their daily tasks effectively. Among them, 22.66% respondents are in need of various types of tablets and antibiotic, 29.69% are in need of hearing aid who are hearing impaired. Needless to say most of them are costly. There is also lack of trained doctors and physiotherapists. In such a position, stakeholders and experts think alike – focusing on the high price of medicines and assistive devices and paying effective attention of government in these regards.

Recommendation: *The cost of medicines and assistive devices should be reduced drastically. Assistive devices can be made locally with cheap rate with the assistance of Government. Private entrepreneurs should come forward in this regard. Effective policy should be adopted so that the price of medicines remains affordable. Government should arrange special training course for physiotherapists in govt. medical colleges and hospitals working with disabled.*

- (b) **Observation:** It was found in the study that, many of the health institutions especially private clinics and hospitals do not have ramp facilities with standard slope. Some 42% of the health institutions do not have ramp facilities all around the country found in study conducted by HKI and NFOWD in 2005. Government hospitals are free from this difficulty. What the problem found in government health institutions are lack of directional signs. If there are directional signs, they are very often ambiguous and installed improperly.

Recommendation: *All the health institutions both government and private should be of ramps with standard slope. Proper directional signs should be installed wherever applicable and required.*

6.2.3 Recommendations for Accessible Employment

- (a) **Observation:** About 75% of the respondents have classified jobs found in the study. Thought it is not a bad figure, general people are very much naïve about the ability of physically challenged people. According to 73% of the respondents, lack of awareness has created discrimination in getting employment between disabled and non-disabled. Those, who got job, told that, in 24.32% cases, the employee was not interested to provide job to them, 9.46% employee wanted to pay less. But it must be remembered that they are not disabled, they are differently abled. They can do what is not supposed and believed to do. So changing the mindset (68.67%) of the employers, colleagues can be a good solution.

Recommendation: *Disabled people can do nothing – this mindset of employers should be changed. Colleagues and relatives should be cooperative and should encourage them to get involved in any kind of job whatever they can.*

- (b) **Observation:** There is 6% quota in government employment for PWDs. Recently, 1% quota in Bangladesh Civil Service cadre has been declared by the government for people with disabilities. Under this quota a PWD should prove his/her disability the system of which is troublesome. Moreover, physical and working environment of the sectors in which they are to get employment are not accessible. The study explored that in 94% cases, there were no initiatives taken to make the physical environment accessible for PWDs. As for example, a competent disabled candidate can get job in BCS-Economic Cadre under the quota program. Working station of this cadre service is either Planning Commission Campus or Secretariat. In planning commission, there is no lift; there are no ramps at the entrances of buildings. So how a can PWD access the 2nd and or 3rd floor for official purposes? And in Secretariat, the building no. 6 has lifts especially for the disabled. What about the others? So accessible built environment should be a prior concern to ensure employment opportunities for persons with disabilities.

Recommendation: *Built structures of offices where there is a chance of PWD to get involved should be made barrier free. Executives i.e. architects, engineers, planners, who has the ability to make the buildings accessible should be proactive to do that. Planning Commission can ensure the accessible building design under Annual Development Plan.*

- (c) **Observation:** It was found that, 66% of the respondents were self-employed. Government is also disbursing credit to the DPOs and NGOs working with the disable. But the stakeholders could not access credit and capital easily. The process of getting credit is lengthy and complicated, which need to be changed. About 18.67% of the respondents think that, arranging adequate credit facilities can bring positive changes in economic lives of physically challenged people.

Recommendation: *Credit disbursement procedures in both the cases of government and non-government sectors should be made quick and user friendly.*

- (d) **Observation:** Lack of initiatives in the further development of skills, lack of awareness of employees in realizing the difficulties are also some important hindrances of employment opportunity found in the study. There is also absence of exemplary activities by the disabled people in the country. About 42% of the respondents thought that, if example can be created, then negative attitude towards should be removed automatically. Though, it is not expected that, service will be provided if they proof their worth. Because, accessibility to job is their right. There should be nothing that can make them compelled to leave or not avail the job.

Recommendation: *PWDs and DPOs should come forward that, they can. And they can even do more if adequate environment is provided. Government can create the enabling environment.*

6.2.5 Recommendations for Accessible Built Environment

- (a) **Observation:** Built structure is the most crucial part need to be addressed in ensuring accessibility for physically challenged people. There might be congenial policy at all levels. But if the built structures are not barrier free nothing would be

meaningful. Educational institutions, health institutions, shopping complexes, government & private buildings, parks, play grounds, theaters, bus terminal, railway station, & piers and jetties were found entirely inaccessible to the PWDs. No educational institutions are barrier free enough to get into; some 33.33% of the health institutions do not have ramp facilities; in 94% cases, there were no initiatives taken to make the physical environment accessible for PWDs. So barrier free built structures with international standard is must for accessible urban services and facilities.

Recommendation: *All the government and private buildings, schools, colleges, universities, shopping complexes, parks, theatres, and bus-train-launch terminals should be made barrier free with proper guideline and maintaining international standard. National Building Code 1993, Dhaka City Building Construction Rules 2006 should be followed consciously and effectively.*

- (b) **Observation:** Streets, footpaths and transport modes as well are found inaccessible. A wheel chair user can not enter into bus/taxi independently without the help of others. The entrances are narrow, level of streets/footpaths and entrances are not equal, no street sign for sight/speech/hearing impaired people in stoppages, no alarm bell for road crossing for sight impaired people is found in the study. These issues are also commented by the physically challenged people. Non-slip floor materials, accessible toilets, and entrances, directional signs are also other necessities for accessible built structures.

Recommendation: *A complete design standard i.e. Accessible Design Standard for Built Structures should be developed for the entire country.*

- (c) **Observation:** There are some incompetence and inadequacies of existing building construction rules, building codes found that made them practically ineffective. Bangladesh National Building Code did not figure out the width of walkway, ramps, height of raisers and handrails in staircases etc.; ramp specifications in entry and exit of buildings are not sufficient for PWDs. Moreover, exact implementation of the BNBC-1993 will also create inaccessible environment for them.

Rule 75 of Dhaka City Building Construction Rules 2006 focuses on primarily physical accessibility (entry/exit, ramp/handrail & lift) (toilet/washroom and parking facilities) commercial building, shopping complexes, health institutions, educational institutions etc. But unfortunately, the rules did not define who are disabled which made its application controversial; nothing is said about mandatory use of brail button in the lift, accessible floor materials and the required space to round the wheel chair and specific distant in the footpath. Furthermore, the rule did not describe the level of footpath and adjacent ground/land. So a rephrasing of the rule with clear specification is required.

Recommendation: *Both the laws should be rephrased with specific requirements for the persons with disabilities.*

Needless to say, these recommendations are both activities & policies in nature and can not be implemented over night. Rather it is a matter of continuous process. Some of them must be accomplished immediately; some activities may be done within a certain period. These accomplishments can ultimately lead to the achievement of long term policy or activity. Responsibility of these activities should go mostly to the service providers and stakeholders as well. However, a policy and activity matrix has been prepared in the study as one of its main objectives for accessible urban services and facilities to the physically challenged people. The matrix has been described in the coming pages.

6.3 Policy and Activity Matrix for Accessible Urban Services and Facilities

Table 6.1 Policy and Activity Matrix for Accessible Urban Services and Facilities

Sl. No	Issue	Policy and Activity				Responsible Authority
		Long Term	Mid Term	Short Term		
1.	Accessibility to Education	1. A 'sub-policy' for education of physically challenged people established in National Education Policy by 2010	1. Education curriculum at all levels should be made pro-disability	1.1	Review existing National Education Policy	MoEd, DSS
				1.2	Make brail book/paper available and cheap	MoEd, DSS
				1.3	Get idea from the stakeholders	MoEd, DSS
				1.4	Classroom should be made accessible	MoEd, DSS, LGED
				1.5	Make available recorded book	MoEd, DSS
		2. Number of accessible schools for each type of disabled people increased	1. Forecasting demand for schools.	1.1	A survey on number of schools for different types of disability and their school requirement should be done	MoEd, DSS
			2. Make the educational institutions accessible	2.1	Accessible entrances, ramps with standard height at all levels and lifts in educational institutions should be developed	MoEd, DSS, LGED, PWD, DoA
				2.2	Make assistive devices/medicine cheap	DSS
		2.3	Teachers training on disability issue should be managed	MoEd, Teachers' Training Centre		

Sl. No	Issue	Policy and Activity				Responsible Authority
		Long Term	Mid Term	Short Term		
		3. Psychological barriers of accessibility removed	1. Awareness raising activities should be done continuously and rigorously	3.1	Arranging seminars, workshops, campaigns etc.	MoEd, DSS, Non-government Organizations
2.	Accessibility to Health	1. Cheap medicine & assistive devices produced locally	1. Managing trade policy to reduce cost of raw materials of assistive devices	1.1	Market price of medicine and assistive devices should be reduced	MoF
				1.2	All the health institutions should have ramps with standard slope. Proper directional signs should be installed wherever applicable and required.	MoH
				1.3	Non-government organizations should come forward to assist in health facilities and providing assistive devices	NGO Bureau, ADAB, FNB, NFOWD
		2. GO & NGO collaboration in ensuring good health		2.1	Make common working agenda with a view to ensure disability development activities	DSS
				2.2	Special training course for physiotherapists of NGOs and govt. medical colleges and hospitals should be made	DSS, MoH
3.	Accessibility to Employment Opportunity	1. Mindset of the people and employer should be changed	1. PWDs and DPOs should come and create example so that people can not express negative attitude	1.1	Equal wage should be provided	MoF
				1.2	Adequate credit facility should be made available and make the procedure easier and convenient.	MoF, DSS
				1.3	Raising awareness	DSS
			2. Monitoring the quota provision for effective implementation	2.1	Built structures of offices/working places where there is a chance of PWD to get involved should be made barrier free.	PWD, LGED
				2.2	Raising awareness	DSS

Sl. No	Issue	Policy and Activity				Responsible Authority
		Long Term	Mid Term	Short Term		
4.	Accessibility to Built Environment	1. A complete design standard - Accessible Design Standard for Built Structures	1. National Building Code 1993, Building Construction Rules 1996, Dhaka City Building Construction Rules 2006 etc. should be replased with specific requirements for the persons with disabilities.	1.1	National Building Code 1993, Building Construction Rules 1996, Dhaka City Building Construction Rules 2006 should be reviewed in light of accessibility of disabled people	Development Authorities, LGD, PWD, MoP
			2. Ensure accessible transportation system and transport mode	2.1	Height of street level and motor vehicle gate should be adjusted so that physically challenged people easily get access into	Development Authorities, LGD, PWD
				2.2	All manholes should be covered with leveled caps	
				2.3	Streets should be made leveled, smooth and non-slip	
				2.4	Accessible primary entrance/ramp with standard measurements should be provided	
				2.5	Street sign for blind, speech/hearing impaired people in stoppages should be provided	
				2.6	Alarm bell for road crossing for sight impaired people should be provided	
				2.7	Motor vehicle should be made accessible	BRTA, BRTC
			3. Ensure accessible public and private building	3.1	Toilet should be made accessible to blind/physically impaired people	Development Authorities, LGD, PWD
				3.2	Along with escalators lift with appropriate sign language should be provided	
				3.3	Slip floor material should be avoided	
				3.4	Specific directions with international symbol should be arranged in all the buildings	

6.4 Conclusion

Disability rights in all over the world are beyond the level compared to where it should be. The developed countries could manage to do something good for PWDs. But in developing countries, disability rights still is a major concern, still it is perceived as a charity function. In developing countries, socio-economic condition is poor; their accessibility to education, employment and health is at minimal level; nearly zero percent built structures are accessible to PWD. However, the study was intended to (i) 'know the socio-cultural and socio-economic status of physically challenged people in Dhaka', (ii) to study the accessibility of physically challenged people to some selected urban services and facilities and (iii) to provide a set of planning & policy recommendations to improve the status and accessibility of physically challenged people. About 150 person were interviewed. Among them, 49 respondents were physically handicapped while 59 respondents were sight impaired. Speech and hearing impaired respondents belong to 37 and 11 respectively. The selected urban services and facilities were built environment (shopping complexes, public buildings, private buildings, educational institutions and health institutions), public amenities (parks, play grounds and theaters), transport/circulation (bus stops, railway stations and piers & jetties), education, health facilities and employment opportunity. Observation survey was conducted on about 70 samples of urban service-facilities to study their accessibility condition.

It is evident from the study that majority of the respondent get social and moral support from their families. About 76% of the respondents take part in family decision matter process. Though the family support made their life within the family atmosphere much easier but it is difficult for them to work outside home.

From observation survey, it is found that most of the built structures were inaccessible. In built structures, particularly, absence of ramps, absence of sign languages in the lift and absence of directional signs in the lobbies, slippery floor materials of the buildings etc made the educational institutions; health facilities and office buildings inaccessible to people with disability. The study found presence of ramps in only 33.34% (off course not with appropriate standard) private buildings. No ramps were found in government buildings (except one - 6 no. Bhaban of Bangladesh Secretariat), educational institutions and even in some health centers. About 70% of the respondents showed dissatisfaction about the slippery floor materials of the buildings. There are no facilities in the parks for the PWDs. Often the entrances of most of the city parks are not accessible.

The study explored that, about 40% movement of the PWDs is done using motor vehicle including 3.25% by private car. And about 44% of the respondents told about the inaccessible

vehicle design prohibit them to enter into. The study also found that bus terminal, railway station, piers and jetties are inaccessible to PWDs. They can not move freely in the streets and footpaths. In fact, the entire city environment is planned without considering the existence of physically challenged people.

Accessing education is characterized by both institutional and structural barriers. Evidences from questionnaire survey showed that, expensive brail material is the major problem (about 27%) for education of sight impaired people. Absence of brail books is also another important problem in this regard. For speech and hearing impaired people, the major problem belongs to the absence of directional signs (about 43%) followed by similar syllabus maintained in education system. Physically handicapped people commented for absence of ramps and inaccessible class rooms (both about 30%) including furniture as the barrier for education. These are the problems of general education system.

The study has been ended with an analysis of 'demand-supply' of urban services and facilities; specifications of education and employment opportunity. There are shortages of formal schools for physically challenged children/people. There are only two schools for the sight impaired people which are formal in nature and can serve only 7% of the sight impaired students in Dhaka. Having four schools in Dhaka, the education condition for hearing and speech impairment children is slightly better. About 34% of them have the opportunity of formal schooling. And there is no school for the physically handicapped found in Dhaka.

The study with analyzing the figures of BBS and PWDs involved in different non-government organizations found that, a fraction (0.16%) of physically challenged people in Dhaka are employed. However, about 75% of the respondents are engaged in various types of jobs found in the study. It depicts that, there is huge requirement of appropriate employment opportunities for the physically challenged people. Considering the all possible factors of inaccessibility, the study has presented a 'policy-activity'/'solution' matrix (Table 6.1) to ensure accessibility in the spheres of selected urban-services and facilities.

Bangladesh is looming to the middle income group countries and obviously going through a transition period within its social, economic and political arena in recent days. At this stage, it is absolutely justifiable to be involved with full force to develop all corners of life. Fortunately, Bangladesh has adopted National Policy on Disability in 1995. & Bangladesh Disability Welfare Act in 2001. With the guidance and directives of these two some improvements i.e. 1% quota in Bangladesh Civil Service, circular to ensure ramps in all government buildings, reserved seats in public buses owned and operated by Bangladesh

Road Transport Corporation (BRTC) have been achieved already. Specifications for disability access in National Building Code -1993 and Dhaka City Building Construction Rules -2006 are also two important achievements. This research has studied the policies related to disability development and examined the experiences from abroad; it has identified the socio-economic status of PWDs; it has analyzed the social, cultural and physical accessibility of them; it has investigated and evaluated the development activities taken by the public and private institutions working in the study area. And at the end, it has provided a set of policy recommendations including a 'policy-activity' matrix (solution matrix) to make positive changes in socio-economic spheres of PWDs and to ensure better accessibility condition in education, health, employment and built environment. These recommendations are not hard nuts and not even the duty of public and private institutions individually. A high level coordination is essential to implement the recommendations and specifications of existing laws related to disability welfare and their accessibility. And most importantly, at this stage a complete design standard i.e. Accessible Design Standard for Built Environments in Bangladesh is indispensable for the entire country. Prior to that, existing laws, standards and specifications need to be implemented, addressed and evaluated properly.

ANNEXURES

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Disability statistics in study area (Dhaka City Corporation)

Population of DCC*	Crude disability rate/1000 in urban area**	Total number of people with disabilities	school going children of total population	Prevalence rate of disability based on type** (%)				
				Sight impairments	Hearing/speech impairment	Intellectual disability	Physically handicapped	Others
5378023	4.21	22841	38.3%	14.81	23.19	19.62	24	18.38
Number of disabled children (age group 0-14)			8672	1284	2011	1701	2081	1594

Table 02: Disabled population in Dhaka City Corporation

Population of DCC*	Crude disability rate/1000 in urban area**	Total number of people with disabilities	school going children of total population	Prevalence rate of disability based on type** (%)				
				Sight impairments	Hearing/speech impairment	Intellectual disability	Physically handicapped	Others
5378023	4.21	22841	38.3%	14.81	23.19	19.62	24	18.38
Number of disabled children (age group 0-14)			8672	1284	2011	1701	2081	1594

* BBS, 2001

** Sample Vital Registration System of Bangladesh Bureau of Statistics, 2002

National disability prevalence rate is considered as the rate of disability in Dhaka and then calculation was done.

If disability rate is 10% as estimated by WHO for developing countries, then measuring on the available standards the figure would be –

Table 03: Disabled population in Dhaka City Corporation (Considering 10% disability prevalence estimated by WHO)

Population of DCC (2001)	Crude disability rate/100 in urban area	Total number of people with disabilities	school going children of total population	Prevalence rate of disability based on type (%)				
				Sight impairments	Hearing/speech impairment	Intellectual disability	Physically handicapped	Others
5378023	10%	53780	38.3%	14.81	23.19	19.62	24	18.38
Number of disabled children (age group 0-14)			20598	3051	4777	4041	4943	3785

**Definition and Types of Disability According to
Bangladesh Disability Welfare Act, 2001¹**

- (1). "Disability" means any person who,
- (a) Is physically crippled either congenitally or as a result of disease or being a victim of accident, or due to improper or maltreatment or for any other reasons become physically incapacitated or mentally imbalanced, and
 - (b) As a result of such crippling conditions or mental impairment-
 - i. has become incapacitated, either partially or fully; and
 - ii. Is unable to lead a normal life.
- (2) Any person having disability described hereunder shall be included in the meaning and scope of the definition under section (1) of this section.
- (a) "Visual impaired" means any person who has-
- i. No vision in one eye, or
 - ii. No vision in both eyes,
 - iii. Visual acuity not exceeding 6/60 or 20/200 (Snellen) in the better eye even with correcting lenses; or
 - iv. Limitation of the 'field of vision' subtending an angle of 20° (degrees) or worse;
- (b) Physically handicapped refer to person who has-
- i. Lost either one or both the hands, or
 - ii. Lost sensation, partly or wholly, in either hand, or it is so weaker in normal condition that the situations stated under subsection 1(a) and (b) are applicable to his case; or
 - iii. Lost either one or both the feet, or
 - iv. Lost sensation, partly or wholly, of either or both the feet, or it is so weaker in normal condition that the situations stated under subsection 1 (a) and (b) are applicable to his case; or
 - v. Has physical deformity and abnormality, or

¹ Functional English Version of Bangladesh Disability Welfare Act 2001 by NFOWD, 2005

- vi. Has permanently lost physical equilibrium owing to neuro-disequilibria; or
- (c) Has "hearing impairment," meaning one's loss of hearing capacity in better ear in the conversation range of frequencies at 40 decibels (hearing unit) or more, damaged, or ineffective otherwise; or
- (d) Has "speech impairment" meaning loss of one's capacity to utter/pronounce meaningful vocabulary sounds, or damaged, partly or wholly, or dysfunctional; or
- (e) Has "mental disability" meaning,-
 - i. One whose mental development is not at par with his chronological age or whose IQ (Intelligent Quotient) is far below the normal range, or
 - ii. Has lost mental balance or is damaged, partly or wholly; or
- (f) Has multiple disabilities, that is one who suffers from more than one type of above stated impairments.

Chronology of International Events for Disability Development

Year	Organization/Agent	Event/Law
1921		James Biggs of Bristol, UK invents the White Cane
1948	UNGA	Universal Declaration of Human Rights
1964	US Congress	Legislation enacted declaring October as White Cane Safety Day in USA
1966	UNGA	International Covenant on Economic, Social and Cultural Rights
1966	UNGA	International Covenant on Civil and Political Rights
1971	UNGA	Declaration on the Rights of Mentally retarded Persons
1975	UNGA	Declaration on the Rights of Disabled Persons
1976	UNGA	Declaration of 1981 as the first International Year for Disabled Persons
1979	UNGA	Convention on the elimination of All Forms of Discriminations Against Women (CEDAW)
1980	WHO	WHO Defines Impairment, Disability & Handicap
1982	UNGA	World Program of Action Concerning Disabled Persons
1982	UNGA	Declaration of the United Nations Decade of Disabled Persons (1983-1993)
1989	UNGA	Convention on the Rights of Children
1990	UNESCO	Jomtien Declaration – Education for All
1991	9 Southern African Countries	Harare Declaration on Legislation of Opportunities for Disabled People
1991	ESCAP	Fourth Asian & Pacific Ministerial Conference on Social Welfare & Social Development Supporting the 2 nd Decade of Disability
1992	UNGA	Declaration of December 3 as International Disability Day
1993	ESCAP	Declaration of Asian and Pacific Decade of Disabled Persons, 1993-2002
1993	UNGA	Standard Rules on the Equalization of Opportunities for Persons with Disabilities
1994	UNESCO	World Conference on Special Needs Education – Salamanca Declaration
1997	SANCBR	Dhaka Declaration on CBR for People with Disabilities
1998	SAARC	SAARC Disability Fund
2000	WEF	Dakar Framework for Action
2002	ESCAP	Biwako Millennium Framework for Action Towards an Inclusive, Barrier-Free and Rights-Based Society for Persons with Disabilities in Asia and the Pacific (2003-2012)
2004	ESCAP	Joint Statement on Proposed Structure, Elements and Principles of A Comprehensive and Integral Convention on the Rights of Persons with Disability” adopted on 11 October, 2004

Accessibility and Access Legislation in ESCAP Region²

Accessibility to Buildings

Respondents from 13 countries reported that building codes and access legislation in some form had been formulated in their countries to improve access for people with disabilities and elderly persons. These building codes and legislation had been instrumental in the provision of better access to new public buildings. In addition to Australia, China, Hong Kong, Japan, Malaysia, New Zealand, the Philippines, the Republic of Korea, Singapore and Viet Nam had included minimum access requirements in public buildings that had been constructed after the adoption of appropriate building codes or access legislation. These improvements were mainly focused on the access requirements of people with orthopedic disabilities. Regarding existing buildings, respondents from Singapore reported that currently the majority of existing public buildings were undergoing substantial renovation. Consequently, the access requirements of people with orthopedic disabilities and elderly persons in these buildings had to be included in accordance with the relevant building regulations.

Hong Kong, Japan, the Philippines, Singapore and Viet Nam reported that municipal service buildings were, to a great extent, barrier-free for those with orthopedic disabilities, while law courts, police stations, post offices and libraries were, to some extent, barrier-free for the same disability group. Almost all the respondents reported that health care centers, clinics and hospitals were barrier-free in their respective countries and territories.

Shops and other commercial places were reported to be partially barrier-free in Hong Kong, Japan, New Zealand, the Philippines, Singapore and Viet Nam.

Most of the respondents also indicated that adequate housing options were not available to persons with disabilities. In this regard, however, responses from Japan, Singapore and Viet Nam were comparatively encouraging.

² Adapted from ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC; Promotion of Non-Handicapping Physical Environments for Disabled Persons: Case Studies; UNITED NATIONS; New York, 1995

Accessibility to Public facilities

A majority of respondents indicated that public places, such as sports facilities and camping grounds, were not barrier-free. With the exception of Australia, Hong Kong, Japan and Viet Nam, persons with disabilities have limited access to banks and other financial institutions. Responses from Australia indicated that banks and financial institutions were providing statements of accounts in Braille to make them usable by persons with visual impairments.

Similarly, public telephones have not been installed in a manner usable by and convenient to the social groups in question. However, the situation in this regard was reported to be better for persons with orthopaedic disabilities in Australia, Hong Kong, Japan, New Zealand, the Philippines, the Republic of Korea and Viet Nam. In most cases, it was reported that public telephones had not been amplified for use by persons with hearing impairments. An exception was Japan, where it was reported that about 20 per cent of public telephones had been amplified.

Accessibility to Roads and inland waterways

From the responses received, it appeared that in much of the ESCAP region, efforts were yet to be made to improve the accessibility of roads and inland waterways. Most of the respondents indicated that accessibility to roads was generally uneven and did not meet the access requirements of the social groups in question. However, responses from Singapore and Australia in this respect were encouraging. It was reported that in Singapore, as a part of a massive ongoing project by the Public Works Department, footpaths and walkways in the central business district were being upgraded to remove barriers such as kerbs and steep ramps. Likewise, in Australia, footpaths, walkways were being adapted to suit the access requirements of people with disabilities.

Respondents from Australia, China, Hong Kong, Japan, the Republic of Korea and Viet Nam reported that efforts had been made to provide adequate ramps for the use of people with orthopedic disabilities and elderly persons. Similarly, only these respondents reported that sidewalks and footpaths or pavements could be negotiated easily and safely by wheelchair users while, to some extent, kerb cuts or dropped kerbs at road crossings were safe for persons with visual impairment as well as wheelchair users.

With the exception of Australia, respondents from all other countries reported that efforts to improve access to inland waterways were yet to be made. However, respondents from Australia reported that ferries had roll-on, roll-off ramps and hoists to improve access.

Accessibility to Transport systems, communications, and information

Responses showed that efforts to provide for better accessibility for persons with disabilities in different means of transport were at the preliminary stages. Most of the respondents indicated that buses, trains and taxis were not generally barrier-free to persons with disabilities. The approach in this area was to develop specialized limited transport services for persons with disabilities. Australia was a fine example of such an approach where key railway stations were being made accessible with lifts, ramps, a tactile network of maps, clear signs and accessible phones. Public and private bus companies were currently replacing high-bodied buses with low bodied-buses.

In Japan, special buses were being operated for persons with disabilities on limited specified routes in the designated, safe and model cities for persons with disabilities. Efforts had also been initiated to provide for accessibility for persons with disabilities in some cars of identified trains.

Respondents from Hong Kong and Singapore reported that the introduction of London-type taxis made the travel of wheelchair users comparatively easier.

With respect to traffic signals, excepting Australia, Hong Kong, Japan and the Republic of Korea, where auditory traffic signals were reported to have been installed for the safety of visually-impaired pedestrians, it was indicated for the other countries and territories of the region that no efforts had yet been made to incorporate the access requirements of persons with disabilities and elderly persons in traffic regulations. In Australia, Hong Kong and Japan, visual signals, to some extent, had been installed as a part of a public information system for the benefit of hearing-impaired persons. Similarly, large and clear public signals had been provided for the benefit of people with intellectual disabilities.

Access to information was an area which had not yet been addressed. However, respondents from Australia indicated that a visually-impaired person could get information in Braille or on audio cassettes. Respondents from India indicated that special news bulletins on television were being telecast through sign language for the benefit of hearing-impaired persons.

The Status of Access Legislation in ESCAP Region

Almost all the constitutions of countries and territories in the Asian and Pacific region guaranteed their respective citizens equality of opportunity in matters of education, training, employment, rehabilitation and recreation, as well as the rights to equal access to public facilities. Similarly, freedom of movement and choice of residence was also guaranteed by the constitutions in the region.

The constitutions of some countries like India, Myanmar and Pakistan stipulated specific policies and programmes concerning people with disabilities and elderly persons to promote their integration into the society.

In order to remove barriers in the built environment which interfere in the enjoyment of these constitutional rights and other related freedoms by these social groups, respondents from the following countries and territories reported the existence of documents on accessibility which are either judicial, quasi-judicial or administrative in character:

<i>Name of the country</i>	<i>Actions/Legislative measures</i>
Australia	The Disability Discrimination Act 1992, which came into force in March, 1993
Hong Kong	Rules and regulations, design guidelines, legislation.
India	Building codes.
Islamic Republic of Iran	Urban and architectural design criteria as approved by Ministry of Housing and Urban Development.
Japan	The Fundamental Law for Disabled Persons (Law No. 84 of 1970 most recently amended through Law No. 94 of 1993). The Act on Buildings Accessible and Usable for the Elderly and Physically Disabled No. 44 of 1994 and its enforcement regulations, and supplementary local design guidelines for improvement of access to the urban environment.
Lao PDR	Codes of practice, rules and regulations, building codes, planning regulations, design guidelines and legislation.
Malaysia	Local-level access legislation through (a) Building (Federal Territory of Kuala Lumpur Amendment) Laws of 1992, (b) Code of Practice for Access of Disabled People to Public Buildings approved by relevant statutory authority in July 1991, (c) Malaysian Standards for Access for Disabled People outside Buildings
New Zealand	Standards, rules and regulations, and building codes.
The People's Republic of China	The Law of the People's Republic of China for the Protection of Disabled Persons adopted on 28 December 1990, and the Design Code for the Accessibility of People with Disabilities to Urban Roads and Buildings.
The Philippines	National-level access legislation through "BATAS PAMBANSA BLG. 344" (Act No. 344) and its implementing rules and regulations, which came into force on 25 February 1983 after receiving presidential approval.
The Republic of Korea	Disabled Persons Welfare Laws as well as standards for barrier-free facilities and building codes.
Singapore	National-level access legislation through Part 4 of Design and Construction Regulations 36.
Viet Nam	Building codes, legislation.

A. Disabled Population of Bangladesh – Evidences from Demographic Survey, 1982

Bangladesh Bureau of Statistics (BBS) conducted the first sample survey on disability in 1982 and published the material titled “Disabled Population of Bangladesh – Evidences from Demographic Survey, 1982” in 1987. Rate of disability identified was 0.77% of the total population. Among them; 0.13% were blind, 0.21% were crippled, 0.16% were deaf and dumb, 0.10% were mentally handicapped and 0.28% were affected other types of disability. Some other disability features resulted in the study were-

A1. Sex-ratio : 106.9

A2. Marital status of aged 10 years and above

Sex	Marital status		
	<i>Never married</i>	<i>Currently married</i>	<i>Widowed/divorced/separated</i>
Male	43.7	54.7	1.6
Female	24.7	65.8	12.5

A3. Literacy rate over 5 years of age

Sex	Age	
	<i>5+</i>	<i>15+</i>
Both	23.7	26.8
Male	30.7	35.3
Female	15.4	17.5

A4. Occupational structure by employment nature

Occupational group	Both sex	Male	Female
Professional/Technical jobs	0.02	0.01	0.05
Administrative/Managerial jobs	0.09	0.10	-
Clerical jobs	1.79	1.50	6.51
Salesmanship	7.79	7.75	6.89
Services	2.57	1.79	15.32
Agriculture	78.04	79.66	51.73
Production/Transportation/Construction workers	9.79	9.19	19.50
<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>

B. Features in the 1991 Census

During the census of 1991, information was collected on disability in the country. It was found that; disability rate of all type around the country is 0.47%. Crippled persons hold the highest prevalence (about 0.21% of the total population) among the disabled people.

<i>Type of Disability</i>	<i>Both Sex</i>	<i>Male</i>	<i>Female</i>
All Type	0.47	0.55	0.39
Blind	0.08	0.09	0.07
Deaf & Dumb	0.10	0.11	0.09
Mentally Retarded	0.07	0.09	0.06
Crippled	0.21	0.25	0.16
Leper	0.01	0.01	0.01
Others	NA	NA	NA

- B1. Sex ratio of disabled people found in the Census 1991 was 106.3.
- B2. Distribution of Disabled Population (10 years and over) by Sex and Marital Status

Marital status	Sex	
	Male	Female
Never Married	31.06	23.95
Currently Married	63.11	35.32
Widow	5.06	35.54
Separated	0.66	2.03
Divorced	0.10	3.16

- B3. Literacy Rates of Disabled Population by age group and Sex, 1991.

<i>Age group</i>	<i>Disabled Population</i>		
	Both Sex	Male	Female
All ages	16.0	20.5	9.3
7+ Year	17.5	22.6	10.0

- B4. Distribution of Employment of Disabled population by Broad Occupational Groups of Main Occupation Sex and Residence, 1991

<i>Broad Occupational Group</i>	<i>BS</i>	<i>Male</i>	<i>Female</i>
Professional	1.91	2.37	0.39
Managerial	0.09	0.12	-
Clerical	1.46	1.89	-
Business	8.46	10.77	0.79
Service	23.38	3.67	88.98
Agriculture	57.33	72.90	5.51
Producing	4.37	5.33	1.18
NEC	3.00	2.96	3.15
<i>All Area</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>

C. Features in Sample Vital Registration System of Bangladesh, 2002

C1. Level of disability

Rate of disability per 1000 population found in SVRS is -

Sex	SVRS-2002			2000
	Total	Rural	Urban	
Male	6.62	7.12	4.46	7.38
Female	5.05	5.32	3.95	4.66
Both sex	5.86	6.24	4.21	6.04

C2. Disability by type

<i>Type of disability</i>	<i>Both sex</i>	<i>Male</i>	<i>Female</i>
Blind	9.99	8.82	11.61
Night blind	4.82	5.15	4.36
Deaf/dumb	23.19	22.01	24.83
Mental	12.46	12.10	12.97
Memory impairments	7.16	6.07	8.66
Cripple	24	27.86	18.68
Goiter	2.91	1.49	4.86
Leprosy (white skin)	1.49	1.57	1.37
Leprosy	1.08	1.03	1.14
Worthless	6.1	6.71	5.26
Others	6.8	7.19	6.25
Total	100	100	100

Other important demographic features like education, economic activities were not found out in the sample survey.

I. Accessibility to Education**A. Physical Accessibility**

Only 5.3% of the institutions had provision of a lift. The same percentage of institutions was found to have inaccessible ramp facilities, with an improper slope ratio within the 1:12 to 1:20 gradient range. Alarming, 94.7% of the educational buildings do not have any kind of ramps to access the building for physically handicapped. Here is a table showing the accessibility condition measured in percentage based on different features in educational institutions-

<i>Item</i>	<i>Stair width</i>	<i>Ramp</i>	<i>Lift</i>	<i>Handrail and railing</i>	<i>Internal door width</i>	<i>Corridor width</i>	<i>Toilet compartment size</i>	<i>Drinking water facility</i>
Accessible (%)	78.9	5.3	5.3	52.6	89.5	89.5	26.3	21.1
Inaccessible (%)	21.1	94.7	94.7	47.4	10.5	10.5	73.7	78.9

In case of furniture and other facilities, the study found that about 89.5% of the educational buildings have sufficient lighting. Conditions on other features are somewhat good, shown in the table-

<i>Item</i>	<i>Induction loop facilities</i>	<i>Separate room facility in library</i>	<i>Required bottom height of the desk</i>	<i>Required desk height</i>	<i>Required bottom height of the blackboard</i>	<i>Sufficient lighting</i>
Accessible (%)	0	0	36.8	42.1	47.4	89.5
Inaccessible (%)	100	100	63.2	57.9	42.6	10.5

B. Beyond Physical Mobility

Only 11% of children with disabilities have access to education. It was found that; enrollment was about five times greater in areas where disability related activities were being conducted by service organizations. About half of these enrolled students were pursuing education in formal education. About a quarter were involved in integrated education systems, while the remaining quarter was involved in special education. About 80% of the respondents expressed that present policies for education development would be ineffective if disability issue is not included purposively. 13% of the respondents commented that, present policy has exerted certain activism in education for disabled people in the country, while the rest opined

that existing policies are sufficient for disability education. The condition of awareness relating to disability education is poor. About 74% of the respondents think that, society/community has no awareness towards disability education. 83% of the respondents consented that there is negative attitude in the educational institutions towards disabled children. In case of support services and facilities, 77% of the respondents told that, there are very poor or no logistic supports such as Braille; audio system etc. 82% of them gave opinion that, teachers in institution have not proper training for disability education. 87% of the respondents showed negative attitude in having assistive devices and counseling services for education of children with disabilities. About 53% of the respondents found their family creating obstacles in obtaining education while 20% highly appreciated their family supports in getting education.

2. Accessibility to Information and Communication

A. Physical Accessibility

Signage is the most important feature in the built environment to be accessible for disabled people. None of the spaces were identified by the international symbol of accessibility, but wall hangings, lists, documents and maps were found in study areas (21.37%) with standard height. 10.44% of the surveyed buildings had directional signs indicating the location of accessible facilities. Only 15.67% were found with contrasting color helpful for people of low vision. But there was a complete lack of information in Braille or Tactile form. There are no pricelists or notice boards in Braille for people sight impairments to do shopping independently. Only 28.6% were found with directional signs for different facilities in bus and train stations. 50% of the terminals had audible information systems for announcements of vehicle departure and arrival.

B. Beyond Physical Mobility

Available computer software are in English which is inaccessible not only for the general people, persons with disabilities also face numerous problems in using those. Students with disabilities do not have access to computer facilities that exists schools where the government runs integrated education programs. PWDs cannot access library databases, the internet, computers at workplace. In case of printing, there is often lack of continuous paper for the use of persons with sight impairment. The average citizen is not aware of the capacity of people with disabilities to use and operate a computer effectively. Those who are aware have lacked the confidence to enroll in computer related training. Cost of computer software like JAWS (Job Access With Speech), Braille printers, special keywords and such is unaffordable

and hence inaccessible. Newspapers are not released in Braille. There is no close captioning or provision of Interpreter on television programs, so that deaf people can read the news as others are listening.

3. Accessibility to Basic Needs Services

Basic needs services in the built environment encompass the following sub-categories of daily life: (a) healthcare including water and sanitation, (b) transportation, (c) housing & others, (d) government buildings and (e) cultural and recreational structures. Accessibility from both physical and non-physical point of view has been explored in this section.

A. Physical Accessibility

i. Healthcare including water and sanitation

The following table shows the accessibility condition in healthcare institutions including water and sanitation.

Item	Parking	Stair width	Internal ramp	Lift	Handrail and railing height	Ramp at the entry gate	Internal door width	Corridors width	Toilet compartment size	Tap drinking water
Accessible (%)	8.3	91.7	41.7	25	100	33.3	91.7	100	16.7	16.7
Inaccessible (%)	91.7	8.3	58.3	75	0	66.7	8.3	0	83.3	83.3

In case of parking only 8.3% of health institutions had facilities for people with disabilities. Among them, only 50% were with the required measurement. But none of them were marked by the international symbol of accessibility for people with disabilities. 83.3% of the stairs were found with non-slip surfaces. 41.7% of the health institutions had ramp facilities, but only 5.26% of them possess the required ratio of slope between 1:12 to 1:20. About 25% of the buildings had lifts with required cab size. In 33.3% of the cases, there were ramps at the entrance beside steps or stairs. 75% of the entrance landing was found satisfactory and 83.3% of the entrance-landing surfaces was finished with slip resistant materials. It was found that, 91.7% of the reception areas in workplaces were sufficiently lighted. In case of public water resources, it was found that, 66.7% of the buildings had floors without slip resistant. The conditions of public toilet are very poor and hence inaccessible to the PWDs.

ii. Transportation

Survey of transportation sector encompasses terminals (airport, railway station, bus station, and launch/steamer station), roads and vehicles.

Terminals

14.3% of the terminals had parking facilities for people with disabilities, but were not demarcated by the international symbol of accessibility. Only 21.4% of them had the provision of ramp. About 7.1% of them maintained the standard ratio of the map. Only 14.3% of the polled facilities had accessible toilets. The table below showing the access condition relating to transportation-

<i>Item</i>	<i>Accessible parking</i>	<i>Stair width</i>	<i>Ramp</i>	<i>Lift</i>	<i>Handrail and railing height</i>	<i>Internal door width</i>	<i>Corridors width</i>	<i>Toilet compartment size</i>	<i>Tap drinking water</i>
Accessible (%)	14.3	35.7	21.4	14.3	28.6	71.4	78.6	14.3	14.3
Inaccessible (%)	85.7	64.3	78.6	85.7	71.4	28.6	21.4	85.7	85.7

Roads and Footpaths

Only 20% of the footpaths were free from obstruction. There were no stairs or ramps found in the surveyed roads. 60% of the road widths are below standard required for persons with disabilities. In respect of road crossing, none of the roads had any pedestrian crossing, separate traffic lights or alarm bells, or curb ramps for people with disabilities.

Vehicles

15.8% of the vehicles had the accessible door width of 300mm (3'-0"), but all doorways of had non slippery floors. For steamers or lannches, only 15.8% had a ramp installed at the doorway, but none were wheelchair accessible. Safety belts were absent in all vehicles and there was no special seating arrangements for PWDs. 36.8% of the vehicles had an audible system necessary for visnally impaired people. 31.3% of buses and trains had low level steps to avail the desired mode of transport. But none of them had accessible corridor width necessary for wheelchair users.

iii. Housing & others

GOB and privately developed housing & residential hotels were the study component in this research. Here is the table showing accessibility condition to housing found in the study-

<i>Item</i>	<i>Parking</i>	<i>Stair width</i>	<i>Ramp</i>	<i>Lift</i>	<i>Handrail and railing height</i>	<i>Internal door width</i>	<i>Corridors width</i>	<i>Toilet compartment size</i>
Accessible (%)	14.3	71.4	0	42.9	100	100	85.7	42.9
Inaccessible (%)	85.7	28.6	100	57.1	0	0	14.3	57.1

From the above table it is found that, no ramps were provided at the entrances of housing building, though 42.9% of the buildings were with lift facilities. All of the buildings had handrails and railing at the danger area of which 71.4% are easy to hold for persons with disabilities. Only 42.9% of the residential buildings had the required size of the toilet compartment and 28.6% of them had clear space inside the toilet for turning a wheelchair.

In banks and post offices, only 14.3% of the building had parking facilities which were not demarcated with the international symbol of accessibility and differentiated from the pedestrian path. 57.1% of the stairs had the required width of landing space for turning the wheelchair. 42.9% of the toilet doors were accessible, but only 14.3% of them had at least one toilet with required compartment size. 28.6% of post boxes in the post offices were found with accessible letter dropping mouth height.

There were 20% markets with ramps beside the entry level. 80% of the surfaces of the stairs were found as slip resistant. About 60% of the toilets had facility both for male and female as separate toilet block. There were no facilities of drinking water in any market or shopping centers. All of the shop counters observed were at the accessible height level.

iv. Government Buildings

Only 10% of the government buildings had parking facilities which were also not marked by any international symbol of accessibility. Inside the building there were only 5% having lift facility. There was complete lack of ramp facilities at the entrance. The following table shows the accessibility condition in government buildings from different aspects-

<i>Item</i>	<i>Accessible parking</i>	<i>Stair width</i>	<i>Ramp</i>	<i>Lift</i>	<i>Handrail and railing height</i>	<i>Internal door width</i>	<i>Corridors width</i>	<i>Toilet compartment size</i>	<i>Tap drinking water</i>
Accessible (%)	10	70	0	5	65	90	85	30	20
Inaccessible (%)	90	30	100	95	35	10	15	70	80

30% of the government buildings had accessible toilets both for male and female with required size of compartment.

v. Cultural and Recreational Built Structures

In all the cases surveyed under this category, there were no provisions of accessible facilities like parking area, lift or ramp. 81.25% of the buildings had the accessible entrance door



required for wheelchair users. Here is the table showing accessibility condition in cultural and recreational built structures-

<i>Item</i>	<i>Parking</i>	<i>Stair width</i>	<i>Ramp</i>	<i>Lift</i>	<i>Handrail and railing height</i>	<i>Internal door width</i>	<i>Corridors width</i>	<i>Toilet compartment size</i>	<i>Tap drinking water</i>
Accessible (%)	0	63.2	0	0	56.3	75	81.3	15.8	0
Inaccessible (%)	100	36.8	100	100	43.7	25	18.7	84.2	100

All the community clubs had sufficient lighting in their reception, whereas none of them had any Braille documents, or counters and desks with required height. About 50% of the public halls had the corridor width with required standard. There was no accessible ablution space in the Mosque or required corridor width between seats at the front and the back of the Church. About 66.7% of the desks of the public library had accessible height.

None of the parks surveyed had any ramp at the entry level. Only 33.3% of the parks had accessible landing spaces at the entrance level. About 66.7% of their walkways were obstruction-free, leveled, smooth and slip-resistant, having an accessible width.

B. Beyond Physical Mobility

Disable children are treated as curse of the family and very often hidden away from family events and gatherings. They are ill fed and receive poor attention while sick. They have not any voice over family decisions, even of their own marriage.

There are no specialized leisure facilities for persons with disabilities. They are excluded from games, sports and other social events due to the prevailing negative attitude towards disability. They are also exploited within their neighborhood and community.

4. Accessibility to Employment

A. Physical Accessibility

Physical accessibility in employment sector i.e. built structures in the working places is not in good position. Both GO-NGO offices of both service and production have been surveyed in this section. The result found is-

<i>Item</i>	<i>Parking</i>	<i>Stair width</i>	<i>Ramp</i>	<i>Lift</i>	<i>Handrail and railing height</i>	<i>Internal door width</i>	<i>Corridors width</i>	<i>Toilet compartment size</i>	<i>Tap drinking water</i>
Accessible (%)	10.5	57.9	15.8	10.5	52.6	84.2	63.2	36.8	10.5
Inaccessible (%)	89.5	42.1	84.2	89.5	47.4	15.8	36.8	63.2	89.5

Only 10.5% of the built environment in employment sector had accessible parking facilities. But none of them were marked by the international sign of accessibility. 94.7% of the staircases were found with non-slip surface. Only 15.8 of the buildings of employment are accessible. Among them, only 5.3% had the standard ratio useful for wheelchair users. Only 10.5 of the buildings had the provision of lift. 5.3 of the entrance doors of could be operated by a person with disability independently. The toilet facilities for disabled people are very poor. Many of them are ill-maintained. Only 5.3% of them were identified by signs, but none of them were marked with Tactile of Braille. 63.2% of the corridors of buildings are obstruction free. Furniture and other facilities in the employment sector were not consciously designed. 84.2% of the reception areas in the employment sector found having sufficient light.

B. Beyond Physical Mobility

People with disabilities face a number of obstacles with respect to access in employment which are not physical in nature. The mindset and attitude of the family and community towards persons with disabilities in terms of employment is always pessimistic. Due to this mindset, disabled people also loss their confidence. 68% of the respondents expressed their lacking of confidence. 26% of the respondents feel the overall attitude of the family and community is comparatively acceptable.

77% of the respondents had shown a complete dissatisfaction with a availability of employment opportunities due to lack of proper training.

Colleagues and employers alike share negative attitudes towards the persons with disability. 76% of the respondents were not accepted by employers and or colleagues while only 18% of them find working environment tolerable.

70% of the respondents feel that there is no such system so far developed or any devices introduced in the country to communicate with people with disabilities depending on its type. 73% of the respondents think that lack of awareness has created discrimination between disabled and non-disabled in getting employment. Potential of disabled people is not known to all. About 70% of the respondents are not satisfied in accessing credit and capital. Discriminations in getting service benefit is also common (about 71%) with the persons with disabilities. A clear division is found between disabled and non-disabled.

A-Type Questionnaire

**Questionnaire for “A Study on Accessibility of Physically Challenged
People to Some Selected Urban Services and Facilities in Dhaka”**

(This questionnaire will be used for research purpose only)

(Questionnaire for collecting information on socio-economic and socio-cultural conditions of PWDs)

Department of Urban and Regional Planning

Bangladesh University of Engineering and Technology, Dhaka

ID #

A. Demographic Features*A1. Identification of the respondent*

a) Name:

b) Address:

c) Age:

(Put lie)

d) Sex:

Male		Female	
------	--	--------	--

e) Household size:

f) Marital status:

Married		Unmarried		Widow		Divorced	
---------	--	-----------	--	-------	--	----------	--

g) Age at marriage:

A2. Family Information

Sl. No.	Relation with the respondent	Age	Sex	Educational qualification	Occupation	Income/month
1						
2						
3						
4						
5						
6						

Code: Sex: Male=1, Female=2

Code: Educational qualification: Illiterate=1, Elementary (able to sign only) =2, Primary=3, SSC=4, HSC=5, Honors=5, Master = 6

Code: Marital status: Married=1, Unmarried=2, Divorced=3, Widow=4

B. Economic Conditions

1. Do you have any personal income? i. Yes ii. No

If yes, what is the occupation? (Put tic)

Doctor		Business		Service	
Engineer		Farmer		Day labor	
Teacher		Engaged in Handicrafts		Others (specify)	

2. How much money you earn per month?

Tk./month

Below 1000		2500-3500		6000+	
1000-1500		3500-5000			
1500-2500		5000-6000			

3. Expenditure pattern of the respondents

Purposes	Amount Last Month (Tk.)
Food	
Clothing	
Education	
Medical	
Transport	
Others	

4. Do you face any problems in getting jobs/self-employed? i. Yes ii. No

If yes, what are the problems?

- Employee was not interested to employ at first due to disability
- Employee wanted to pay less amount of money
- People told that I could not do the task and so discouraged me
- Adequate credit facility is not available

5. What do you think? What should be done to resolve problems in this field?

- i. Mindset of the people should be changed
- ii. To create example so that people can not express negative attitude
- iii. Equal wage should be provided
- iv. Adequate credit facility should be made available

C. Cultural or Societal conditions

(Put Tic)

Question				Yes	No
a. Do you get assistance in you movement and personal activities from the family at home?					
b. Do you get assistance in you movement and personal activities from the family in outside?					
c. Do your family members take food together including you?					
d. Does your family consult with you about family matters?					
e. Do your family members respect your consent?					
f. Do you enjoy TV/Radio program together with your family members at home?					
g. Do you get opportunity to go for movie/theatre with your family members?					
h. How your family members behave with you?				(put tic)	
Good	Not good	Bad	Not bad	Medium	

1. What do you think about your status in the family and in the society?

- a. society ignores us
- b. family behaves good but society very often overlook
- c. people in the society look at different way
- d. society does not want us

2. What are the problems you face in the family?

- i. no problems
- ii. no answer/NA
- iii.
- iv.

3. What are your expectations from family/relatives/society?

- a. society must give due respect to freedom fighters
- b. people should look with dignity
- c. we must receive assistance from them so that we can go ahead
- d. we must receive due respect as human being from them

4. What do you think? What should be done to resolve problems in this field?

- i. Increasing awareness
- ii. Spreading the aspirations/ideas of liberation to all
- iii. Don't know

5. What do you think of physically challenged family members of your family? (*For family head*)

(If applicable)

D. Education

1. What is your level of study?

h) Educational Status:

Illiterate		Elementary		Primary	
SSC		HSC		Honors	
Master					

2. What type of education system you had?

i. General

ii. Special (Please

elaborate)

3. What type of problems you faced/are facing in getting education?

General:

- i. No reader
- ii. Expensive brail materials
- iii. No such help form NGOs
- iv. Similar syllabus is maintained which create problem
- v. Unavailability of books
- vi. No ramps in education building – we can't move

Special:

- i. expensive of education materials
- ii. lack of trained teacher
- iii. unavailability of education materials
- iv.

4. What do you think? What should be done to resolve problems in this field?

- i. make brail book/paper available and cheap
- ii. trained teachers should be managed
- iii. ramps should be provided in education building
- iv. appropriate syllabus should be arranged
- v. NGOs should take necessary arrangements to ease the problems of disabled people.

E. Health

1. How you became disabled?

- a. lack of proper treatment
- b. lack of nutrition
- c. by birth
- d. accident

2. What type of assistance you received from your family then?

- a. family tried to recover, spent money but failed
- b. no assistance due to poverty
- c. no assistance

3. What kind of regular health service you need (if any)?

Type: a) eye dropper b) tablet/antibiotic c) injection d) crutch

Kind:

4. What are the problems in getting regular health services?

- a) no medicine b) no doctor c) no problem d) expensive medicine
- e) expensive assistive device

5. What do you think? What should be done to resolve problems in this field?

- i. Govt. should take necessary actions
- ii. the cost of medicine should be reduced
- iii. the cost of assistive devices should be reduced
- iv. trained doctors and assistants should be managed
- v. non-government organizations may come forward to assist in health and providing assistive devices.

G. General Accessibility

1. How many times you go outside your home/residing place?
2. Where do you go usually?
 - a) university b) shopping c) street begging d) selling goods e) office
 - d) business e) others
3. What is your mode of transport in general?
 - a) rickshaw b) CNG/Taxi c) walking d) bus e) private car
4. What are the problems you face when you go outside?

Physical environment

Items	Answer	
Transport mode	a. Does not want to take	
	b. Demand high fare	
	c. Is not accessible	
Road	a. Street is full of cracks	
	b. Open manhole	
	c. No street sign for blind people in stoppage	
	d. No street sign for speech/hearing impaired people in stoppage	
	e. No alarm bell for road crossing for blind	
	f. No street sign for speech/hearing impaired people for road crossing	
	g. Not appropriate (leveled, smooth, non-slip) for using wheel chair	
	h. street level and motor vehicle gate is uneven	
Building	a. Slip floor material	
	b. No ramp	
	c. Ramp is available but not in actual standard	
	d. No lift but escalators	
	e. No sign language in the lift	
	f. No specific direction with international symbol	
	g. Primary entrance is not accessible	
	h. Toilet is not accessible to blind/physically impaired people	

5. What kind of assistance/improvement you expect in physical environment?

- a. Rickshaw puller/CNG/Taxi drivers should be made aware about disabled people so that they behave well
- b. Motor vehicle should be made accessible
- c. Streets should be made leveled, smooth, non-slip
- d. All manholes should be covered with leveled caps
- e. Street sign for blind, speech/hearing impaired people in stoppages should be provided
- f. Alarm bell for road crossing for sight impaired people should be provided
- g. Height of street level and motor vehicle gate should be adjusted so that physically challenged people easily get access into.
- h. Slip floor material should be avoided
- i. Ramp with standard measurements should be provided
- j. Along with escalators lift with appropriate sign language should be provided
- k. Sign language should be provided in all the lifts
- l. Specific directions with international symbol should be arranged in all the buildings
- m. Primary entrance should be made accessible
- n. Toilet should be made accessible to blind/physically impaired people

B-Type Questionnaire**Questionnaire for “A Study on Accessibility of Physically Challenged People to Some Selected Urban Services and Facilities in Dhaka”**

(This questionnaire will be used for research purpose only)

(Questionnaire for observing accessibility to physical environment)

Department of Urban and Regional Planning

Bangladesh University of Engineering and Technology, Dhaka

Checklist**Built Environment*****Shopping complexes***

Presence of ramp for wheelchair users:	i. Yes	ii. No
--	--------	--------

If yes, angle of ramp

Flore materials:	1. Tiles	2. Mosaic	3. Brick
------------------	----------	-----------	----------

Presence of sign language for hearing impairments:	i. Yes	ii. No
--	--------	--------

Presence of sign language for speech impairments:	i. Yes	ii. No
---	--------	--------

Presence of sign language for sight impairments:	i. Yes	ii. No
--	--------	--------

Buildings

Presence of ramp for wheelchair users:	i. Yes	ii. No
--	--------	--------

If yes, angle of ramp

Flore materials:	1. Tiles	2. Mosaic	3. Brick
------------------	----------	-----------	----------

Presence of sign language for hearing impairments:	i. Yes	ii. No
--	--------	--------

Presence of sign language for speech impairments:	i. Yes	ii. No
---	--------	--------

Presence of sign language for sight impairments:	i. Yes	ii. No
--	--------	--------

Private buildings

Presence of ramp for wheelchair users: i. Yes ii. No

If yes, angle of ramp

Flore materials: 1. Tiles
2. Mosaic
3. Brick

Presence of sign language for hearing impairments: i. Yes ii. No

Presence of sign language for speech impairments: i. Yes ii. No

Presence of sign language for sight impairments: i. Yes ii. No

Educational Institutions

Presence of ramp for wheelchair users: i. Yes ii. No

If yes, angle of ramp

Flore materials: 1. Tiles 2. Mosaic 3. Brick

Presence of sign language for hearing impairments: i. Yes ii. No

Presence of sign language for speech impairments: i. Yes ii. No

Presence of sign language for sight impairments: i. Yes ii. No

Health institutions

Presence of ramp for wheelchair users: i. Yes ii. No

If yes, angle of ramp :

Flore materials: 1. Tiles
2. Mosaic
3. Brick

Presence of sign language for hearing impairments:	i. Yes	ii. No
Presence of sign language for speech impairments:	i. Yes	ii. No
Presence of sign language for sight impairments:	i. Yes	ii. No

Public amenities

Parks

Is there any facility for physically challenged people to enter with? i. Yes ii. No

If yes, for whom? -----

What are the facilities?

i.

ii.

iii.

iv

Can a physically challenged people move freely in the park? i. Yes ii. No

If no, what are the problems?

i.

ii.

iii.

iv.

Play grounds

Is there any facility for physically challenged people to enter with? i. Yes ii. No

Is there any seating provision for physically challenged people? i. Yes ii. No

Theaters

Seating arrangements for wheel chair users: i. Yes ii. No

Transport

Bus Stop

Is there any facility for physically challenged people to enter with? i. Yes ii. No

If yes, for whom? -----

What are the facilities?

i.

ii.

iii.

iv

Railway station

Is there any facility for physically challenged people to enter with? i. Yes ii. No

If yes, for whom? -----

What are the facilities?

- i.
- ii.
- iii.
- iv

Piers and jetties

Is there any facility for physically challenged people to enter with? i. Yes ii. No

If yes, for whom? -----

What are the facilities?

- i.
- ii.
- iii.
- iv

Ramp to the vehicle: i. Yes ii. No

Seat of the vehicle: i. Yes ii. No

**Information Format measuring supplies of level of selected service-facilities for
physically challenged people in Dhaka**

(This questionnaire will be used for research purpose only)

ID #

1. Name of the organization:
2. Address:
3. Number of persons with disabilities directly supported: Female
Male.....
4. Number of persons with physical disabilities directly supported: Female
Male.....
5. Number of persons with hearing and or speech impairments directly supported:
Female.....Male.....
6. Number of persons with sight impairments directly supported: Female
Male.....
7. Number of persons with intellectual disabilities directly supported: Female
Male.....
8. Number of persons with multiple disabilities directly supported: Female
Male.....
9. Available services for the persons with disabilities

(Put tic)

a. Advocacy and awareness	
b. Education	
c. Physiotherapy	
d. Skills training	
e. Training and tot	
f. Information and research	
g. Assistive device and accessibility	
h. Treatment	
i. Financial assistance to DPOs or micro-credit	
j. Income generation program	

10. Approach of the program

(Put tic)

a. IBR	
b. CBR	
c. CAHD	
d. Others	

11. Number of staff supporting disability program: Female Male.....
12. Number of staff with disability: Female Male.....

Government Efforts for Disability development

1. Rehabilitation of acid burned women and physically disabled

Social Welfare Department has started this program in 2002/03. Any women who is acid burned or physically disabled, is eligible to receive Tk.10,000-Tk.15,000 loan under this program. By the year 2004/05, it is found that, Tk.65 crore was disbursed to the affected people.

2. Training and rehabilitation of socially disabled girls

There are six centers through out the country for training and rehabilitation of socially disabled girls in each division. Disabled girls, who are involved in illegal trade, prostitution etc. is getting training and rehabilitation services from these centers. About 33 girls took training and completely rehabilitated by these centers so far around the country.

3. Integrated blind education

This is an integrated education program where both the pupils having sight and not are getting education. There is 64 such type of education centers located in each districts of the country. Four teachers with sight impairments and having master degree got employment in these centers in 2003.

4. Center for mentally disabled

There is a center run by Social Welfare Department for 100 mentally disabled children at Raufabad, Chittagong. Students are getting technical education along with general education in the center. About 40 children received services so far from the center.

5. National training and rehabilitation center for persons with sight impairment

The center has been introduced in 1978 at Tongi to make the adult person with sight impairment self-reliant through technical education and skill training. The capacity of the center is 50. About 52 adult person with sight impairment got complete rehabilitation services from the center.

6. Govt. School for Blind and Deaf & Dumb

There are four 'Training, Employment and Rehabilitation Center for Physically Disabled' introduced in the then four divisions i.e. Dhaka, Rajshahi, Chittagong and Khulna of the country in 1962. Four Blind Schools and four Deaf and Dumb Schools are being operated under these centers. Moreover, in 1965 another two Deaf Schools have been established in Faridpur and Chandpur. Furthermore, during 1981, a Deaf School and a Blind School has been established in Barisal and Sylhet respectively. Total capacity of these schools is 510.

7. Skill Training and Rehabilitation Center for Physically Handicapped (Tongi)

The center has been introduced in 1978 to provide technical education and training to interested physically challenged youths. Training on carpentry, cane, welding, mechanical works, poultry, plastic products, making of artificial limbs of from 6 months to 1 year duration is offered to the disabled whose age is 15-25 years. Each of the trainee got Tk.4000 as rehabilitation charge to become self-reliant. Total capacity of the center is 85. The center provides hearing aid to the affected people after proper testing. Moreover, *mole* for hearing aid and quality plastic products are being produced in the center.

8. National Disability Development Foundation

The National Disability Foundation was introduced in 1999 aiming to identify disability, to provide disability education, training, assistive devices, credit facilities for self-reliance etc. and thus total development of disabled people in the country.

8.1 Credit Disbursement

During 2002/03, one crore taka has been disbursed form the Seed Money and subsequently the profit of the foundation reached to 8670 stakeholders of about 91 non-government organizations all around the country.

Table 8A: National Disability Development Foundation

<i>Sl. No.</i>	<i>Item</i>	<i>No. of stakeholders</i>	<i>Amount of money(taka)</i>
1.	Income Generating	1600	34,81,000
2.	Assistive Devices	2751	28,91,700
3.	Medical Service	2126	19,82,600
4.	Education	1805	5,41,500
5.	Micro Credit	388	11,03,200
Total		8670	1,00,00,000

In 2003/04, another 1 crore taka as grant and 50 lakh taka as micro credit has been disbursed to about 211 non-government organizations throughout the country.

8.2 Financial Facilities to Educational Institution

National Disability Foundation provides financial assistance to different educational institution from its revenue budget. By the end of 2003/04, it assisted different institutions amounting Tk.9,30,000.

Table 8B: Financial Facilities to Educational Institution by National Disability Foundation

Year	Allocation	No. of institution	No. of Teacher/Staff	No. of Student
2001/02	2,10,000	2	22	53
2002/03	3,60,000	7	56	264
2003/04	3,60,000	12	133	648

9. Assistance to organizations under National Disability Foundation

A. National Center of Special Education

There is a Teachers Training College and two separate schools for Hearing Impairment and Mentally Disabled at the center located in Mirpur, Dhaka. These two schools can accommodate 70 students. Government is to open high school education for deaf in January 2006 in the NCSE campus with residential facility. Only about five students pass each year from the institution as stated by its faculty. By the end of 2004, about 350 teachers got training on special education from the institution. Among them about 25-30 were blind. Usually they engaged themselves in NGOs working for disabled. There are also some exceptions. Some fresh graduate are coming to get additional training and being advantaged with a view to play bigger role in education.

Government expends Tk.600 for each residential student at the center which includes food and other daily necessities. Each student get 2 sets of new dress and one set school dress each year in the center.

There are 20 seats in Class I only and in the rest classes the number of seats is 10 each.

Teaching staff available:

Principal : 1
Vice-principal : 1
Manager : 1

Table 9A: Teaching Staff of National Center of Special Education

<i>For deaf school</i>	<i>For mental retarded school</i>	<i>For blind school</i>	<i>Combined teacher</i>
Head Master - 1	Head master - 1	Head master - 1	Music - 1
Senior teacher - 5	Senior teacher - 5	Senior teacher - 5	Religious - 1
Assistant teacher - 1	Assistant teacher - 5	Vocational teacher - 2	Mobility - 1
Speech therapist - 1	Physiotherapist - 1	Mobility teacher - 1	Physical instructor - 1
Vocational teacher - 3			

About 100 applications usually submitted against 20 seats of the center each year. In case of mentally retarded children the submission rate is higher. More than 30 students come from outside, who are non-residential and get education in the center. They do not receive any type of facilities as the residential students get.

Here is the table showing financial assistance to these institutions amounting total Tk.2,23,98,000 –

Table 9B: Financial Assistance to National Centre for Special Education

<i>Year</i>	<i>Allocation</i>	<i>Stakeholders</i>	
		<i>No. of Teacher/Staff</i>	<i>No. of Student</i>
2001/02	71,00,000	75	70
2002/03	75,00,000	75	70
2003/04	77,98,000	75	70

B. SWID-Bangladesh (Society for the Welfare of the Intellectually Disabled-Bangladesh)

SWID-Bangladesh give assistances to 40 schools for intellectually disabled around the country of which the number of students is 7,000. Amount of financial assistance is given in the following table-

Table 9C: Financial Assistance to SWID-Bangladesh

<i>Year</i>	<i>Allocation</i>	<i>Stakeholders</i>	
		<i>No. of Teacher/Staff</i>	<i>No. of Student</i>
2001/02	1,03,40,000	442	7000
2002/03	1,03,40,000	442	7000
2003/04	1,56,50,000	442	7000

C. Bangladesh Disability Foundation

This is a private organization under the National Disability Foundation working in Manikganj and Dhaka districts. There are 7 institutions under Bangladesh Disability Foundation. Description of financial assistance is as follows-

Table 9D: Financial Assistance to Bangladesh Disability Foundation

<i>Year</i>	<i>Allocation</i>	<i>Stakeholders</i>	
		<i>No. of Teacher/Staff</i>	<i>No. of Student</i>
2001/02	18,00,000	56	700
2002/03	18,00,000	56	700
2003/04	18,00,000	56	700

Surveyed Built Environment Establishment

1.	Shopping Complexes	1. Rapa Plaza, Mirpur Road 2. Metro Shopping Mall, Mirpur Road 3. Dhaka New Market 4. Kamafuli City Garden, Malibag 5. Rangs Anam Shopping Arcade, Satmasjid Road	6. Basundhara City Shopping Mall 7. Rifles Square, Dhanmondi 8. Maskat Plaza, Uttara 9. Sejan Point, Farmgate 10. Polwel Super market
2.	Government Building	1. Secretariat 2. Planning Commission Campus 3. Purta Bhaban, Segunbagicha	4. Sikkha Bhaban, A Gani Road 5. Matsya Bhaban, A Gani Road
3.	Private Building	1. Grameen Bank Bhaban, Mirpur-2 2. Shilpa Bank Bhaban, Motijheel 3. BSRS Bhaban, Karwan Bazar 4. Progati Tower, Karwan Bazar 5. ASA Tower, Shyamoli	6. South-East Bank, Dhanmondi 7. Navana Tower, Gulshan-1 8. HSBC Bank, Dhanmondi
4.	Educational Institution	1. Dhaka University 2. BUET 3. Oxford International School, Dhanmondi, 27 4. Residential Model School & College, Mohammedpur 5. Mirpur Bangla College, Mirpur	6. Udayan High School 7. Agrani Girls High School 8. BUET Laboratory School 9. United International University, Satmasjid Road 10. Sarkari Bigyan College, Farmgate
5.	Health Institution	1. Dhaka Medical College & Hospital 2. Sohrawardi Medical College & Hospital 3. Lab Aid Specialized Hospital, Science Laboratory 4. Japan-Bangladesh Friendship Hospital, Satmasjid Road	5. Trauma Center, Shyamoli 6. City Hospital, Satmasjid Road 7. Compath Lab, Panthapath 8. Central Hospital, Dhanmondi 9. Comfort Diagnostic, Green Road
6.	Parks	1. Dhaka Sishu Park 2. Bahdur Shah Park, Sadarghat 3. Dhanmondi Lake 4. Gulshan Lake	5. Wonder World, Gulshan 6. Chandrima Uddyan 7. Ramna Uddyan
7.	Play Grounds	1. Dhaka Stadium 2. Mirpur Stadium-2 3. National Women Sports Complex,	4. Mirpur Indoor Stadium 5. Maolana Bhasani Hockey Stadium Dhanmondi 6. Abahoni Limited Play Ground
8.	Theaters	1. Shyamoli Cinema Hall 2. Balaka Cinema Hall 3. Jonaki Cinema Hall	4. Experimental Theater Hall, Segunbagicha 5. Mahila Samity, Baily Road 6. Guide House, Baily Road
9.	Bus Terminal	1. Gabtoli Bus Terminal 2. Sayedabad Bus Terminal	3. Mohakhali Bus Terminal
10.	Railway Station	1. Kamalapur Railway Station	
11.	Piers & Jetties	1. Sadarghat Launch Terminal	

Centre for Rehabilitation of Paralyzed (CRP)**CRP at a glance**

Floor space : 150,000 sqft (13th floor)
Main functions of CRP comprises : 65,000 sqft (up to 5th floor)
Total number of rooms : 67

Floor	Use type	Number of rooms	Number of toilets
Ground floor	Outdoor (Gymnasium, Physiotherapy, Occupational therapy, X-ray)	8	8
1 st floor	Laboratory	15	12
2 nd floor	Canteen, Seminar Hall	7	10
3 rd floor	Ward, bed	14	14
4 th floor	Children department	12	11
5 th floor	Operation theatre	11	4
Total		67	59

No. of beds in hospital : 50
Lifts : 2
Stair cases : 2
Ramps (with 12:1 slope) : 1 (up to the 13th floor)

Accessible entry:

- Accessible ramp with standard slope
- Convenient Reception with standard height (30" from floor)
- Telephone at the reception and display centre is in low height
- Chairs of waiting corner are accessible
- Availability of sufficient wheel chairs at the waiting corner
- Accessible lift
 - Stretcher and wheel chair can get into the lift
 - Access buttons are lower height

Accessible toilets:

- Door width - 34"/36" (wheel chair width is 30"-34")
- No bit at the entrance of the gate so that wheel chair can go through
- Lock system in the toilet (just like hook made of wood use in rural Bangladesh)
- Almost high commodes in toilets
- There is a liver type system to sit on the commode for wheel chair user (mostly used in the CRP main campus located in Savar)
- Standard commode height
- All the basins are 30" height
- Liver type water tap

Accessible canteen:

- No bit at the entrance of the canteen
- Table height is 30"
- Water basins are of 30" height
- Liver type water tap
- Cash counter height is of 30"

Medical facilities:

- Diagnostic services
- Physiotherapy
- Occupational therapy
- Stroke rehabilitation unit
- Operation theatre
- Pharmacy and ambulance service
- Medical care and consultancy
 - Orthopedics
 - Neuro-surgery
 - Diseases of female and children
- Home therapy service (indoor and outdoor)

Architectural design done by Architect Rafiq Azam

Structural design done by Engr. T M Majharul Islam

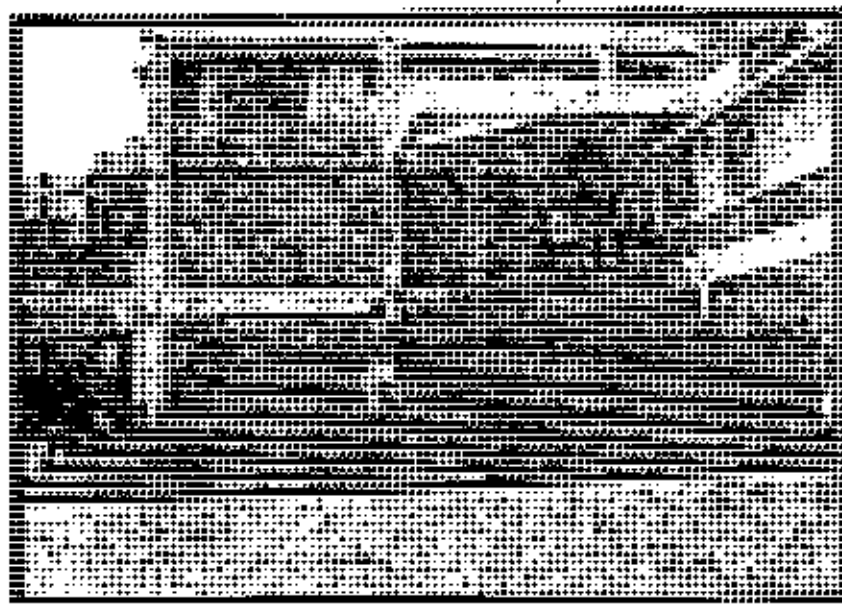
Chief Consultant was Dr. Basunia, Professor, Department of Civil engineering, BUET, Dhaka

Construction was accomplished by Paradise Consultants, Dhanmondi, Dhaka

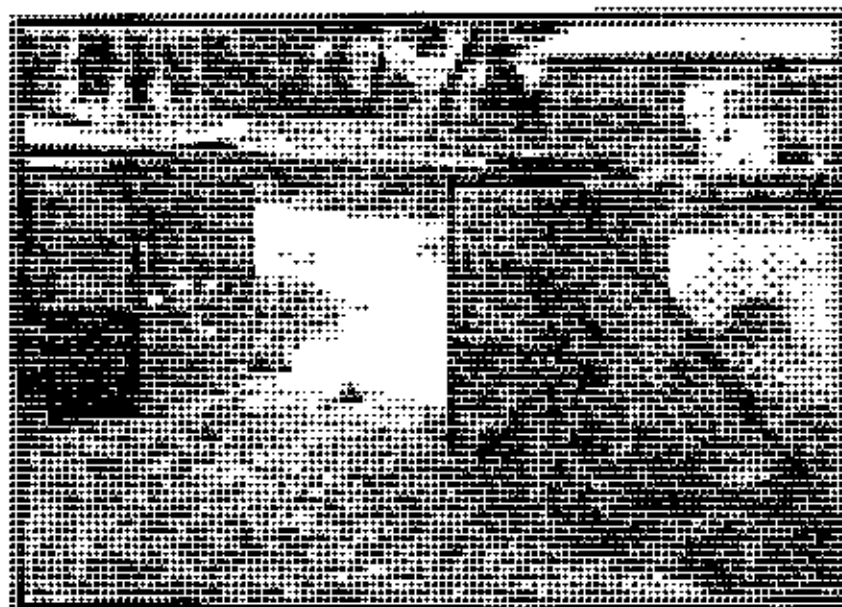
There was a Construction Management Team (CMT) for overall supervision of the project

List of photographs

Inaccessible built environment



Photograph 1: Inaccessible stairs of Central Public Library, Dhaka



Photograph 2: Inaccessible entry of Dhanmondi Lake (Rd. No. 16), Dhaka

Inaccessible built environment (continued)



Photograph 3: Inaccessible Entrance of Kamlapur Railway Station



Photograph 4: Inaccessible Ticket Counter for Wheel Chair Users at Kamlapur Railway Station

Inaccessible built environment (continued)



Photograph 5: Inaccessible Outdoor Entrance for Wheel Chair Users at Kamlapur Railway Station



(1)



(2)

Photograph 6: Inaccessible Jetties at Sadarghat Launch Terminal

Inaccessible built environment (continued)



(1)

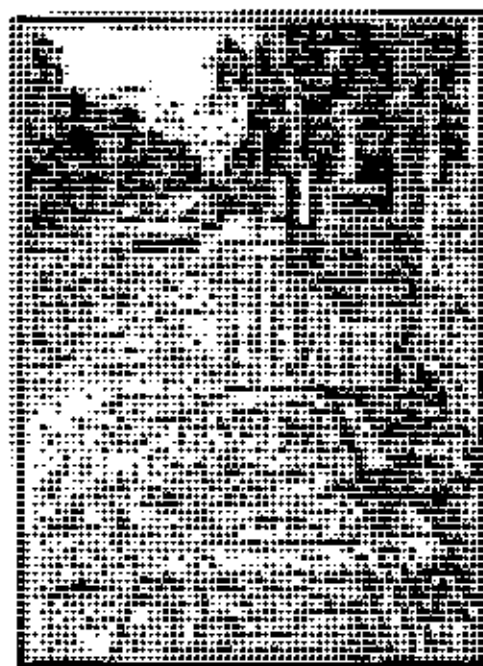


(2)

Photograph 7: Inaccessible launch and stairs inside Jetties at Sadarghat Launch Terminal



(1)



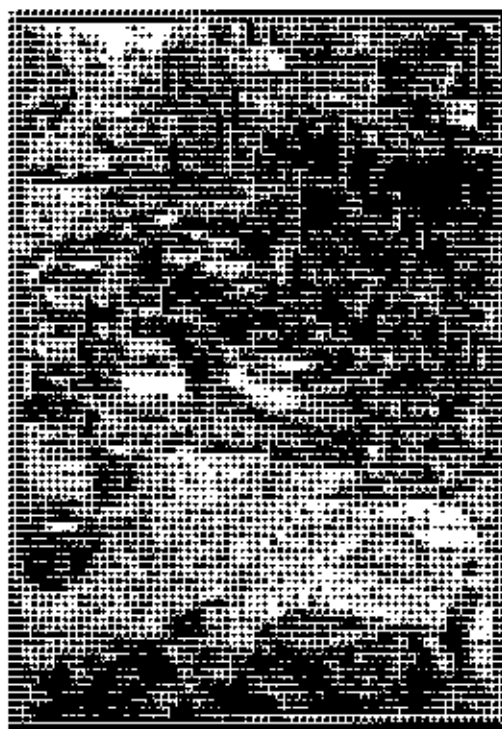
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Photograph 8: Inaccessible Footpaths and Streets (1)

Inaccessible built environment (continued)



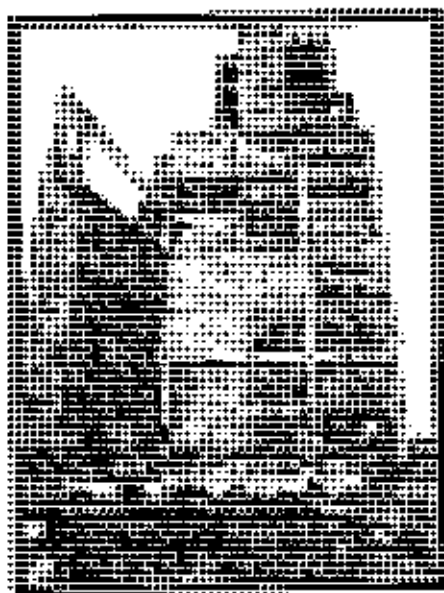
(1)



(2)

Photograph 9: Inaccessible Footpaths and Streets (2)

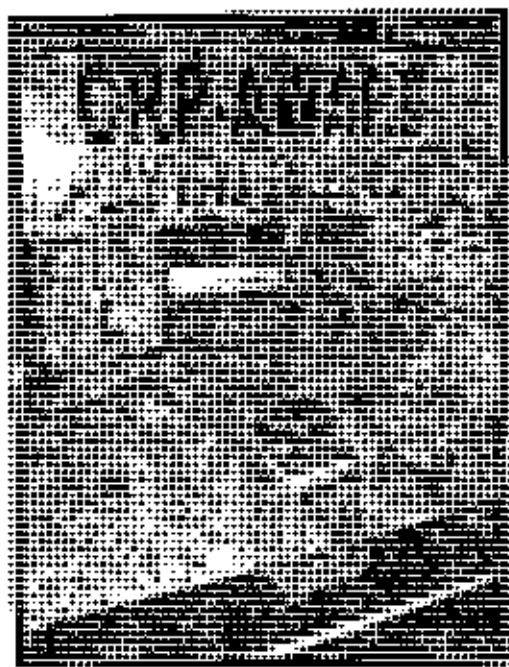
Accessibility and accessible features of CRP Building



Photograph 10: CRP Building

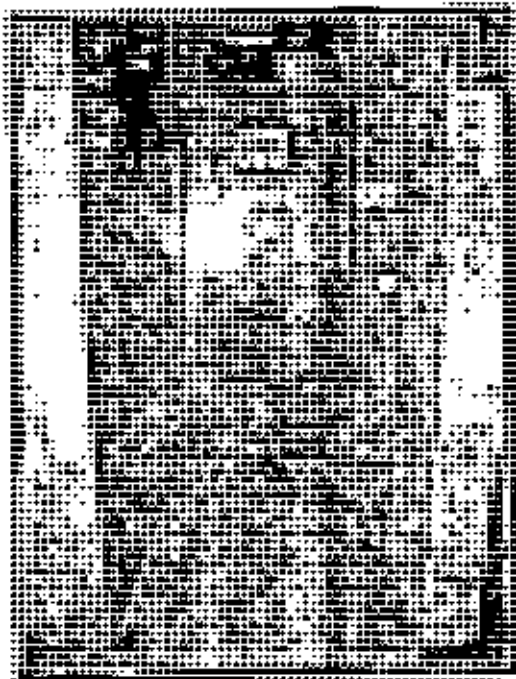


Photograph 11: Accessible Ramp

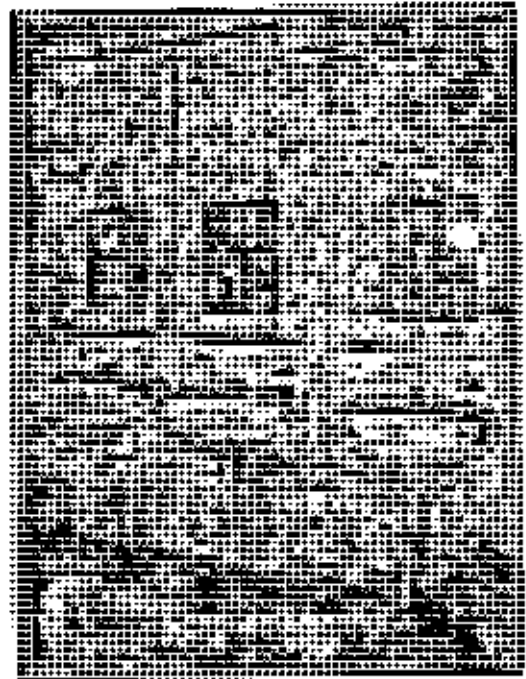


Photograph 12: Accessible Phone Stand

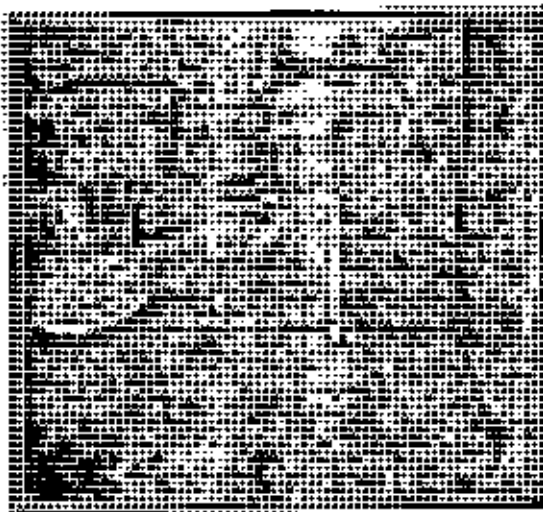
Accessibility and accessible features of CRP Building (Continued)



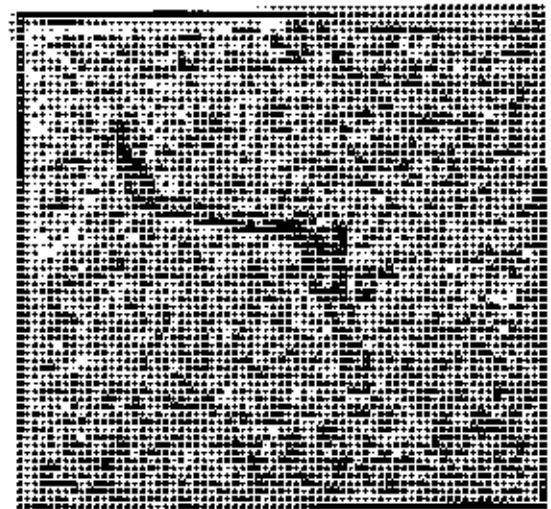
Photograph 13: Accessible Toilet Entrance



Photograph 14: Accessible Hand Basin

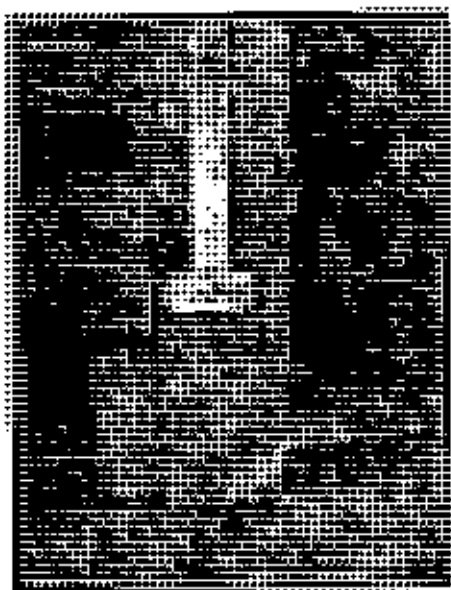


Photograph 15: Accessible Toilet



Photograph 16: Accessible Hand Tap

Accessibility and accessible features of CRP Building (Continued)



Photograph 17: Accessible Electric Switch



Photograph 18: Accessible Brail Button in the Lift



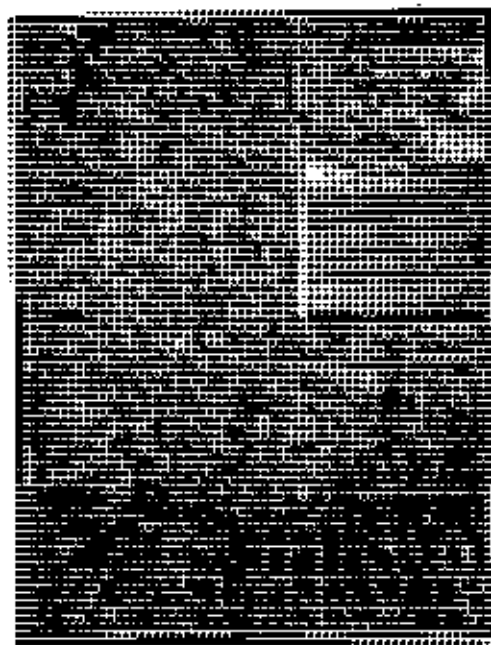
Photograph 19: Accessible Reception Desk



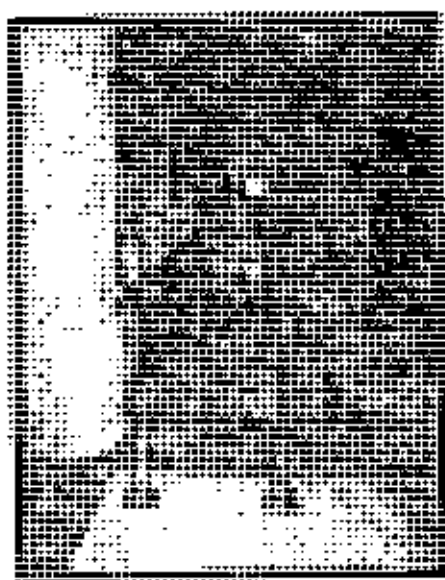
Accessibility and accessible features of CRP Bnilding (Continued)



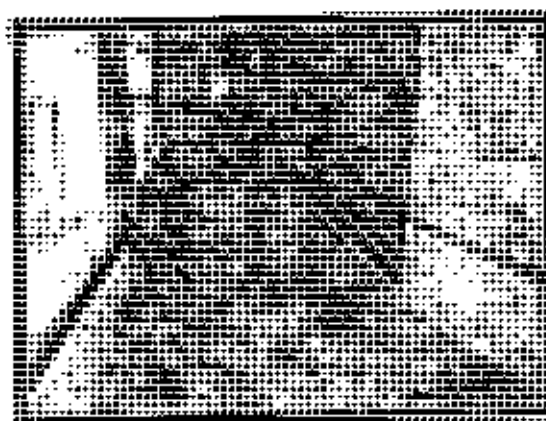
Photograph 20: Accessible Tea Table



Photograph 21: Accessible Hand Rail (1)



Photograph 22: Accessible Hand Rail (2)



Photograph 23: Accessible Hand Rail (3)