

“Schools for Children with Autism Spectrum Disorder (ASD) in the Capital city  
of Bangladesh: perspective of available facilities”

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Bangladesh Health Professions Institute (The academic institute of CRP)  
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**In partial fulfillment of the requirements for the degree of B.Sc. in**

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<b>Declaration</b>
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I am Md. Shaikhul Hasan declare that the study will not be harmful for the participatory schools. Then I would like to ensure that all the data and literature were stated correctly. In that case all discussion of this research project is mine and I am only responsible for any mistake in whole study.

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Dedicated to my dearly loved family members.....

### **Introduction**

Childhood related condition and autism is a developmental disorder. They are characterized by severe language impairments, poor quality of social interaction, and repetitive stereotyped activities in place of the imaginative and social pursuits of normal children. Autism is a focusing condition and it has no curable treatment to overcome this. That's why it is a major problem in our country. But there are some therapeutic interventions to maximize their social interactions, language skills, communication skills, etc. The Special Needs School (SNS) for children with autism is the best place to get these facilities beside of education for improving communication skills, social interaction, etc. There are many special schools, but they are not available with available facilities. That's why the investigator was done this study on "Schools for Children with Autism Spectrum Disorder (ASD) in the Capital city of Bangladesh: perspective of available facilities" and this report may get as an advocacy tool to ensure better facilities.

### **Aim & Objectives**

The aim of the study is to find out the facilities are available in SNS for children with autism spectrum disorder. The aim was fulfilled under two specific objectives as, to find out what educational resources and therapy materials are available in SNS and to find out the availability of human resources for children with ASD in SNS.

### **Method**

Survey methodology is selected as study method. Here, 7 schools were selected from 15 schools by following simple random sampling. Checklist was the data collection tool. The interview and observation were the data collection methods under this study.

### **Result**

The investigator found that all participatory schools were concerned about occupational therapist whereby only 28.60% schools had speech & language therapist and 57.10% schools

had psychologist. Then 63.29% schools had available TLMs as educational resources. Also 55.14% schools had available therapy materials as therapy resources.

### **Conclusion**

These results suggest that most of the schools need to improve their facilities. Because they had limited facilities.

### **Keywords**

Autism Spectrum Disorder (ASD), Special Needs School (SNS), Facilities.

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## Glossary of Terms

ABA:	Applied Behavior Analysis
ASD:	Autism Spectrum Disorder
AT:	Assistive Technology
AWF:	Autism Welfare Foundation
BHPI:	Bangladesh Health Professions Institute
DTT:	Discrete Trial Training
ECE:	Early Childhood Education
FGD:	Focus Group Discussion
IEP:	Individual Educational Program
IQ:	Intelligence Quotient
LEAP:	Life Education for the Autistic Person
PDD:	Progressive Developmental Disorder
PECS:	Picture Exchanging Communication System
SLT:	Speech & Language Therapy
SNS:	Special Needs School
SPSS:	Statistical Package of Social Science
SWAC:	Society for Welfare of Autistic Children
TEACCH:	Treatment and Education of Autistic and Communication related Handicapped Children
TLM:	Teaching Learning Materials
UK:	United Kingdom

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**1.1 Introduction**

Autism Spectrum Disorder (ASD) is the most common developmental disorder in developing country like Bangladesh (Hossain, 2011). Dr. Leo Kanner was the first person who described this condition and named it autism (Miller-Kuhaneck and Glennon as cited in Miller-Kuhaneck, 2004, p. 1). Autism is also known as Progressive Developmental Disorder (PDD) (Miller-Kuhaneck, 2004, p. 1). Normally, we can identify the children with autism by considering some characteristics as poor eye contact, groping behavior, poor social interaction etc.

“The prevalence of this disorder in the UK is 91 in every 10,000 peoples and it is estimated that over 500,000 peoples in the UK have an Autism Spectrum Disorder. In this disorder boys are more affected than girls and it is approximately 4:1, unfortunately it has no known causes, but research suggest that genetic factors are involved here” (Smeardon, 1999, p. 30). In Asia context, the prevalence is 3-4 per 1,000 live births now in India and the incidence rate is approximately 1 in 9,666 or 11,914 people. According to this estimate, over 2 million people are living with autism in India (Bhargava, 2010). Nevertheless, only a few surveys have been conducted by different organizations on disability and it transpires that there are about 13 million disabled people in Bangladesh (Zaman & Anam, 2003, p.44). Here Autistic Children’s Welfare Foundation (2011) assumed that about 3, 00,000 children are affected by autism. That’s why, autism is the most remarkable condition, and the prevalence of this condition is increasing (Yeargin-Allsopp et al. as cited in Hess, Morrier, Heflin and Ivey, 2007) day by day. That’s why it is a major issue, and the United Nations created the World autism awareness day, April 2<sup>nd</sup>, with the intention to raise awareness of autism at all levels in society (UN General Assembly, 2007 as cited in Kim, 2010).

The children with autism spectrum disorder have some common characteristics like unable to speak if speak then unintelligible, attention deficit, poor social interaction etc. For that reason, they are unable to follow the normal school education system like normal curriculum, usual teaching methods and aids, etc. That’s why children with autism spectrum disorder are needed special school for special education as well as one teacher with one student and individual educational plan for each student, etc. Because a special school provides them lot of facilities for special education.

In Bangladesh, there are many special schools for them. But there is no numerical statistics. In Dhaka city, there are many special schools but maybe they are having some facilities gap like not available with human resources, educational resources, and therapy resources facilities. That's why it was a major problem. Although the special schools are not available with available school facilities but approximately 15 percent children with disabilities are enrolled in special schools of Bangladesh (Rasheed, 2003). So, lack of facilities of special schools are common problem for them. For that reason, this study investigator conducted this study like facilities of special schools for children with autism. There he was tried to cover these significant facilities as human resources, therapy materials and educational resources of special need schools under this study.

## **1.2 Background and Literature Review**

ASD in children is the most common condition in Bangladesh. It is a lifelong developmental disorder and characterized by severe speech, language, attention and social interaction and behavioral problem (Cascella and Colella, 2004). That's why they are become delay in every sector of normal development especially in school education. So, it is a big problem in our country. School education for children with ASD is an effective issue for them and here many special schools are available. Children with ASD required special care and special facility and special school provides these facilities. But they are not quite able to provide those facilities.

Autism is a complex disorder and children with autism need special education service. It can be categorized as special education classes. The classes were designed specifically for students with autism, taught by special education teachers (United States Government Accountability Office, 2005). There, the most effective student teacher ratio is 3:1 and class sizes of 6 students are therefore standard. Every teacher at the special school needs one assistant for each class (Bolton and Baron-Cohen, 2002, p. 62). The special teachers at the school are working collaboratively with speech and language therapist, occupational therapist, educational psychologist, social worker, and nurses (Dunlop et al., 2009). Noland and Gabriel (2004) claimed that a multidisciplinary team is important for working collaboratively as an intervention recommendation. Strock (2007) is also found that a multidisciplinary team in school is important to prepare an individual educational program (IEP). This program carries out a set of instructions goal on specific skills and the IEP is an agreement between school and family. This team may be formed with community

pediatrician, educational and clinical psychologist, social worker, voluntary agencies, speech and language therapist, physiotherapist, occupational therapist, medical/health professional, teachers, parents/guardians and educational assistance, school nurses, etc (Working together: A guide to Special education and Student Services, n.d.; Schwartz and Drager, 2008; Noland and Gabriel, 2004; and Strock, 2007; United States Government Accountability Office, 2005). The school is providing vocational training, art facility, and dance as education services (Asian and Pacific Decade of Disabled Persons, 1993-2002: The Starting Point, 1993, p. 74-75).

A special need school is also providing special educational resources such as special curriculum, books, personal desks, pens, pencils, boards etc. It also provides appropriate play areas for playing basketball, football, handball, netball, volleyball, table tennis with accessible equipment. The Information Communication Training (ICT) room, canteen was also including as educational resources (Hirano, 2009). These schools also provide assistive devices, allowance for transport, escorts, readers, uniforms, books and stationery and stipend for girls to complete their educational needs (Bhargava, 2010).

The special school provides several therapeutic interventions besides of education and different professionals are working for this. Different professionals of the school are considered five teaching/intervention strategies for children with autism in classroom and during therapy session. These are gentle teaching (to develop interpersonal relationship), sensory integration, cognitive behavioral modification (by social stories, power cards, decision making), assistive technology (PECS, picture cards, visual schedule) and others (TEACCH, Music therapy, Art therapy) (Hess, Morrier, Heflin and Ivey, 2007). Beside this Early Childhood Education (ECE) service is for children with autism at pre-school ages and IEP for a school year at school aged children educational program (Mehl, 2005).

In special school one to one basis intervention is the most effective way of intervention. The target intervention is usually provided in one-on-one session by the special educator, school psychologist, speech and language therapist and occupational therapist (Koegel, Matos-Fredeen, Lang, and Koegel, 2011). One-on-one service is more effective but it costly for that 2:1 child to adult ratio is better (Mehl, 2005).

To provide these educational services and therapeutic interventions, every special school should have various special equipments and assistive technology. Because these need to improve the communication skills, organization, motivation, academic skills, independence,

and attention of students with ASD. Those Assistive Technologies (AT) are computers, videotaping, calculators, overhead projectors, recording instruments, highlighting tape, photo albums, laminated photographs, reminder cards, activity schedules, photo albums, and picture communication symbols etc (Ennis-Cole and Smith, 2011).

From the view of the literature a model SNS should be developed by these human resources as teachers, psychologist, speech and language therapist, occupational therapist, school nurses, etc; the educational resources and therapy materials are also involved with these human resources like special curriculum, special books, personal desk, pen, pencil, board, special teaching methods and therapy materials are ball, picture cards, story book, photo albums, schedule cards, remainder cards etc. Finally, Bangladesh is a developing country and here many special schools are opening day by day, but they do not consider any standard model for establishing these schools. So, the investigator tried to find out the available resources available in different schools for children with ASD.

### **1.3 Rational of The Study**

The study is useful because by this study the investigator may provide a guideline or information tool on school facilities for children with ASD. It is important to know about these facilities because an SLT work in school, and he/she is working as an advocate or adviser or therapist. The guideline is provided by considering human resources, educational resources, and therapy materials. The study is also important because it provides numerical statistics like how many schools has speech and language therapist? So, the concern person of SLT department can ensure about it and try to promote SLT profession by creating SLT post in special schools. Besides this, the SLT department can arrange an advocacy program on school facilities for children with ASD to promote SLT profession and here this study used as an advocacy tool. The study is also important for students because they can know about special school and the schools' facilities by this study.

Beside this, a Speech and Language Therapist works with those children who have communication difficulties and children with ASD is one of them. They are works in autism schools for improving their communication skills. That's why this study may help the speech and language therapist for better understanding of school facilities for children with ASD. Then this is the first research in this field, and it may be the most effective study for every special need school of Bangladesh. Because it provided information on facilities gap in

special schools. So, the study will be helpful to guide the school's authority for improving their school facilities and services for children with ASD.

#### **1.4 Operational Definition**

##### **Autism Spectrum Disorder (ASD)**

Smearon (1999) claimed that "An autism spectrum disorder is a complex developmental disability that affects the way a person communicates and relates to people around them and some people may also have learning disability with accompanying this condition". On the other hand, "Autism is a lifelong complex neurological disorder and it may affect on the development of various abilities and skills, and it also characterized by impairments in communication and social interaction, as well as unusual patterns of behaviors, interests, and activities" (Miller-Kuhaneck, 2004, p. 1).

In this study, autism is the most common developmental brain disorder of the children, and this may affect on the child's communication, learning, social and behavioral skills, they showed some common sign as poor eye contact, groping behavior, poor social interaction, speechless or talk with own self, etc.

##### **Special Needs School (SNS)**

Babu (2003, p. 57) claimed that special school particularly designed to address the special needs of specific learners with disabilities like visual, hearing and speech, intellectual, etc. SNS for children with special need means their everything is special like special educational curriculum, special classrooms, special setting, special teachers, environment, etc (Parrott, Bruce and Zergaeng as cited in McCarthy and Neville, 1992).

According to the investigator, SNS consider the educational needs of the children and their treatment facilities, and it assumes that they are promoting curable facilities for children with special educational needs and here everything is special as classroom, educational curriculum, teaching techniques, therapy materials, educational equipment, settings etc for every student of children with ASD. For this reason, a multidisciplinary team is formed by speech and language therapist, occupational therapist, psychologist, special educators, medical officers, social workers for working collaboratively in the special schools.



## **Facilities**

Facilities means opportunities for doing something possible as a service, buildings, pieces of equipments, etc (Oxford word power dictionary, 1997, p.226) and the facilities available in special need school means availability of special educators, neurologist, physiotherapist psychologist, accessible environment, cafeteria, special equipment, personal table, communication boards etc, (Heward and Orlansky, 1980).

According to this study, facilities are available means the availability of human resources (teachers, social workers, speech and language therapist, physiotherapist, occupational therapist and psychologist), educational resources (teaching methods, teaching aids, special curriculum, personal desk, pen, paper, pencil, book, sign language, computer, diary, board, marker, routine, educational program, learning facilities, etc) and therapy materials (picture exchanging communication system, picture card, ball, puzzle, problem solving task, matching game, sensory integration toys, etc ) in special needs school for children with autism spectrum disorder.

## **1.5 Research Question, Aim and Objectives**

### **Research Question**

What are the facilities available in special need schools for children with Autism Spectrum Disorder?

### **Aim of the Study**

To find out what facilities are available in special need schools for children with Autism Spectrum Disorder?

### **Specific objectives**

- To find out what educational resources and therapy materials are available in special need school?
- To find out the availability of human resources for children with Autism Spectrum Disorder in special need school.

## 2.2 Study Design

Cross sectional (prospective survey) study design was used to conduct this study. The cross-sectional survey provides information about larger population from a smaller number of samples (Bailey, 1997, p. 66). The survey was primarily used to measure characteristics of a population (Depoy and Gitlin, 1998, p. 120). Particularly investigator used this study design to find out the facilities available in autism schools. There information was collected from samples at one point of time and the questions were asked on events and sites (Bowling, 1997, p. 217) so it is cross sectional survey study. There investigator used checklist on school events that's why this study design was also selected.

Noland and Gabriel (2004) and Roy (2003) has conducted the study on special schools, and they were used this type of study design to develop a model process for children with ASD in inclusive school and comparative study between two special schools. So according to them investigator assumed that it was an effective study design.

## 2.3 Study Place

Schools for children with ASD in the Capital city of Bangladesh were selected for the location of this study.

## 2.4 Study Population

Schools for children with ASD in Bangladesh were selected as subjects of the study.

## 2.5 Sample Size

The 7 schools were considered as samples. The investigator chosen small numbers of sample to obtain the better-quality data (Bowling, 1997, p. 157). Besides this, the location and condition of the subjects are playing a vital role for selecting these samples (Hicks, 2000, p. 24). That's why investigator selected these samples to make the data collection procedure easy, cheapest, and simple.

## **2.6 Sampling Procedure**

Simple random sampling method was used to select the study sample from the study population. Initially the investigator considered 15 special need schools to conduct the simple random sampling procedure. Lottery was the simple random sampling technique in here. The seven schools were selected as study samples by lottery. The whole procedure was done by the student of Speech and Language Therapy department to make it more reliable and transparent.

## **2.7 Sample Characteristics**

### **2.7.1 Inclusion and Exclusion criteria:**

Special schools for children with ASD were included as study sample and rest of schools were excluded for this study in the Capital city of Bangladesh.

### **2.7.2 Rational behind of sample characteristics**

The aim of the study was to find out the facilities available in special needs school for children with ASD. To achieve this study aim it was important to select special needs school for children with ASD. That's why investigator made these inclusion criteria to select the study sample from study population. Then it is hard to find out the purely autism school that's why all special schools for children with ASD were selected as study population or subjects. So, all the special schools for children with ASD were included in inclusion criteria of the study sample. Then rest of special schools entered exclusion criteria.

## **2.8 Data Collection Tool**

Checklist was the data collection tool for this study. The checklist was developed following the literature suggestions. Whereby school infrastructure checklist of Hirano (2009), the autism toolbox of Dunlop, Tait, Leask, Glashan, Robinson, Marwick, et al. (2009) and so on were the literatures. Then the investigator collected information on characteristics of study population from those literatures. The checklist is done by considering characteristics of study population as human resources, educational resources, and therapy resources. The school infrastructure checklist of Hirano (2009) is given in appendix-12. The checklist is covered by 13 items under those characteristics of population and here establishment of the school is also set aside. Because it will help to discuss all findings with establishment year. The investigator is also tried to include all types of information under those facilities. That information was set in order with related items and added others (specify....) point for others information in this order. The data collection tool or checklist is given in appendix-11. The

other supportive materials like pen, pencil, eraser, white paper, clip board were also used as data collection tools.

## **2.9 Data Collection Procedure**

The investigator used mixed data collection procedure to collect the data. Because the investigator could use multiple method strategy for gathering information (Butler and Howell 1980 as cited in Greg, Ranovich and Howell, n.d). Data collection procedures were face to face interview and observation. According to Fraenkel and Wallen (2000, p. 436) face to face interview is the best way to get full cooperation of the participant in a survey. At the beginning of the data collection procedure investigator gave consent form to school principal and informs him/her about the study and purpose of the study. The consent form is given in appendix-10. The investigator arranged face to face interview with school principal to figure out the best answer from the checklist. The investigator observed therapy materials and TLM of the school besides of interview. Checklist of the data collection tool is structured by close ended questions like multiple types of question. For collecting data investigator took 6 weeks time. The time was varied from different schools. The approximant time duration for each school response was 1 hour.

## **2.10 Data Analysis**

Data was analyzed by descriptive statistics and calculated as percentages, mean and standard deviation by SPSS (Statistical Package of Social Science) version 16.0 because it was good to give “the percentages and means for all the characteristics under this study so that the reader has a thorough understanding of the subjects and variables” (Bailey, 1997, p.122)

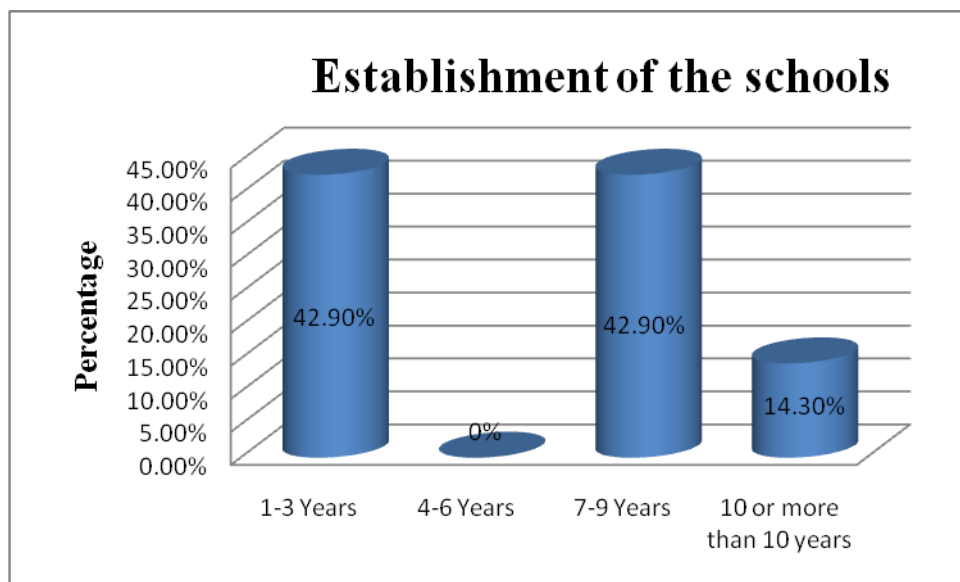
All the data were presented by using bar graphs, pie charts and table. There are many useful ways to illustrate descriptive data as well as tables, bar graphs, and pie charts (Bailey, 1997, p.123).

## **2.12 Ethical Consideration**

The investigator followed the guideline given by the ethical review committee. The permission of the study assured from Speech and Language Therapy Department of BHPI. The Investigator made a written consent form and evaluated it by ethical board. Schools were the samples in this study. That’s why every School’s participation was voluntary. They were having enough rights to withdraw from this study. Then it ensured that the study will not be harmful for study sample. The investigator is also ensured that, all data and recorded information were kept confidentially.

Every special school has different types of facilities and in this study, the investigator tried to find out the availability of human resources, educational resources, and therapy resources under the following title of ‘‘School facilities for children with Autism Spectrum Disorder in the capital city of Bangladesh: perspective of available facilities’’. The findings are showing below with discussion and literature supports.

### Establishment of the schools:



**Figure 1: Establishment of the schools**

Figure 1 shows that, among the 7 schools, 42.90% (3) schools were established at 1-3 years ago. Another 42.90% (3) schools were established at 7-9 years ago and only 14.30% (1) school was established at 10 or more than 10 years ago.

### 3.1.1 Human Resources:

School professionals were the human resources in this study. From the literature and according to study the human resources are special educators or teachers, occupational therapist, speech & language therapist, psychologist, musician, artist, dancer, etc and they were working collaboratively (Working together: A guide to Special education and Student Services, n.d.; Schwartz and Drager, 2008). Among those human resources the investigator found that.....

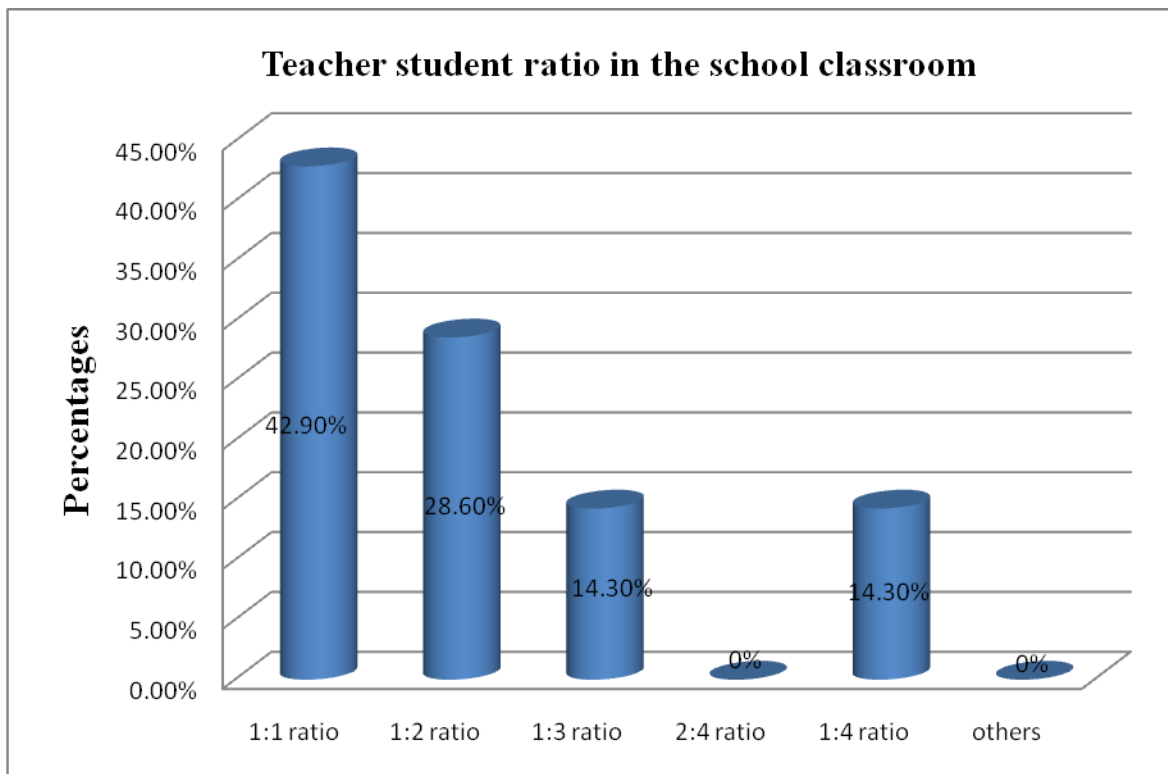
Schools no.	Establishments of the school	Different professional in the school and their qualification									
		SLT		OT		Psychologist		Teacher		Others	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
School 1	2004	0	0	1 (B.Sc.)	0	1 (M.Sc.)	0	55 (M.S)	0	5 (music-2, art-1, dance-1 & sports-1)	0
School 2	2009	1 (B.Sc.)	0	1 (B.Sc.)	0	1 (M.Sc.)	0	42 (M.S)	0	1 (early childhood developmental)	0
School 3	2004	0	0	1 (B.Sc.)	0	0	0	36 (M.S)	0	2 (vocational-1 7 music-1)	0
School 4	2000	0	0	1 (B.Sc.)	0	1 (M.Sc.)	0	48 (M.S)	0	4 (music-1, cafffe-1, art-1 & computer-1)	0
School 5	2009	0	0	1 (B.Sc.)	0	0	0	9 (B.Sc. and specialist on ASD)	0	0	0
School 6	2010	0	0	1 (B.Sc.)	0	0	0	28 (graduate)	0	2 (music-1 & dance-1)	0
School 7	2004	1 (B.Sc)	0	1 (B.Sc.)	0	1 (M.Phil)	0	32 (M.S)	0	0	0
Total percentages		28.60%	71.40%	100%	0%	57.10%	42.90%	100%	0%	71.40%	28.60%

**Table-1: Different professionals in the school.**

Table-1 shows that among all the schools, 100% (7) schools had special teacher and occupational therapist where by 28.60% (2) schools had available SLT and 57.10% (4) schools had psychologist. Besides those here 71.40% (5) school had other (music, art, dance, vocational, computer and cafeteria) professionals' facilities. But a special school must have special educators and additional therapist for additional problem about their typical developments (Gwynne-Atwater, 2011). That's why those schools were not available with available human resources. The table is also shows that there all professionals were well qualified and here only one schoolteacher had intermediate passed but she is a specialist on ASD. So, older schools were provided more facilities than newly developed schools. The study showed that 42.90% schools were established at 7-9 years ago and table-1 shows that those schools were considered better human resource facility than others school like there were 45 professionals in average.

### 3.1.3 Teacher Student Ratio in the Classroom:

The literature suggests that the types of teacher student ratio are differ from school to school and the study shows that 1:1, 1:2, 1:3, 1:4 and 2:4 types of teacher student ratio. Whereby investigator found that.....



**Figure 2: Teacher student ratio in the classroom**

School classes were designed especially for the children with ASD. The special educator was responsible as a class teacher. There figure-7 shows that, among 7 schools, 42.90% (3) schools were following 1:1 teacher student ratio. Then 28.60% (2) were following 1:2 and only 14.30% (1) school was following 1:3. The figure is also demonstrated that 14.30% (1) school was following 1:4 teacher student ratios into the classroom. According to Mehl (2005), 1:1 teacher student strategy is better and effective, but it is costly for that 1:2 teacher student ratio is applicable. Accomplishments of the schools are depending greatly on the professionals of the centers (Ellis, 1990). That's why professional numbers are the major factors in this type of schools. The teacher and student ratio are an important issue in here and the study found that, most of the schools are following evidence-based teacher student ratio in school classroom.

Finally, according to the study investigator, human resources are the big challenges for every special school. The investigator suggests that if any school has 30 students, then the school should have 30 or 15 teachers and every school must have these professionals as special educators, occupational therapist, speech and language therapist and psychologist.

## 3.2 Educational Resources

Educational resources were teaching methods, teaching aids, TLMs, special curriculum, sign language, outreach educational program and learning facilities in this study. Among those resources here investigator shows all the findings with literature support and discussion.

### 3.2.1 Types of Teaching Methods:

According to the study the teaching methods are lecture, demonstration, focus group discussion, and role play and storytelling. Beside those there are also some teaching methods as ABA, TEACCH, ECE, etc. Among those teaching methods investigator found that.....

School no.	Different types of teaching methods in school						
	Lecture	Demonstration	FGD	Role play	Storytelling	Mixed	Others
School-1	+	+	-	+	+	+	+ (ABA)
School-2	-	+	+	+	+	+	-
School-3	+	+	+	-	+	+	+ (ABA, TEACCH, PECS, DTT)
School-4	+	+	+	+	+	+	+ (ABA)
School-5	-	+	+	-	+	+	-
School-6	+	+	-	+	+	+	+ (ABA, TEACCH, PECS)
School-7	-	+	+	-	+	+	-
Total percentages	57%	100%	71%	57%	100%	100%	57.10% (+), 42.90% (-)

Here (-) means not available and (+) means had available.

**Table-2: Teaching methods those were applied in the classroom**

The table-2 shows that, among 7 schools, 57% (4) schools applied lecture method. 100% (7) schools used demonstration and storytelling methods. The table is also shows that 71% schools used FGD, and 57% (4) schools used role play teaching methods. That's why overall 100% schools were used mixed teaching methods upon the students in classroom. The table is also demonstrated that there 57.10% (4) schools were applied others teaching methods as ABA, TEACCH, PECS, DTT besides of mixed methods and 42.90% (3) schools were not applied others teaching methods. According to Gwynne-Atwater (2011), the PECS, TEACCH and ABA are the effective teaching methods for children with ASD. The TEACCH program has no age limitation, and it is effective for increasing IQ level for children with ASD (Ellis, 1990 and Miller-Kuhaneck 2004, p. 267). On the other hand, PECS is a well-established method for them. The PECS is important for expressing their desires, answering questions, and making comments. So, PECS is valuable for teaching functional communication beside of spoken language (Miller-Kuhaneck 2004, p. 260 and 261).



### 3.2.2 Teaching aids:

From the literature and by the view of the study the teaching aids are over head projector, video tape, board & marker, multimedia, poster & picture cards (Ennis-Cole and Smith, 2011). Among those teaching aids investigator found that...

School no.	Different types of teaching aids in school						
	Over head projector	Video tape	Board & marker	Poster & picture cards	Multimedia	Mixed	Others
School-1	+	+	+	+	+	+	-
School-2	-	-	+	+	-	+	-
School-3	-	+	+	-	-	+	-
School-4	-	-	+	+	+	+	-
School-5	+	-	+	+	-	+	-
School-6	+	+	+	+	+	+	-
School-7	+	-	+	+	-	+	-
Total percentages	57% (+)	43% (+)	100% (+)	86% (+)	43% (+)	100% (+)	0% (+)

Here (-) means not used and (+) means had used

**Table-3: Teaching aids those were using in the classroom**

The above table-3 shows that, among 7 schools, 100% (7) schools were using board and marker, 57% schools used over head projector and 43% schools used video tape teaching aids. The table is also demonstrated that 86% schools used poster and picture cards and 43% schools used multimedia as teaching aids. Finally, overall, 100% schools used mixed teaching aids for students. So, the study found that these schools are following evidence-based teaching methods and aids.

### 3.2.3 Educational programs:

From the literature and according to the study the educational programs are sign language, special curriculum (IEP, ECE, etc), outreach educational program (outreach educational programs are shopping, parking, attaining in cultural competition, art competition, special Olympic, visiting, marketing, study tore, attaining in mela & restaurant) etc. Among those resources investigator found that.....

School no.	Different types of educational resources in the school		
	Sign language	Special curriculum	Outreach educational program
School-1	-	+	+
School-2	-	+	+
School-3	-	+	+
School-4	-	+	+
School-5	-	+	-
School-6	-	+	+
School-7	-	+	+
Total percentages	100% (-)	100% (+)	86% (+), 14% (-)

Here (-) means not available and (+) means had available.

**Table-4: Different types of educational programs in the school**

The table-4 shows that, among 7 schools 100% schools were not available for arranging sign language teaching program. But it is important to teach sign language for children with autism to clarify each child. The recent data is addressing that “say it with sign” as possible (Webster, Konstantareas, Oxman and Mack, 1980, p. 216). That’s why sign language is effective for them. The table is also shows that 100% schools were using special curriculum and 86% schools provided outreach educational program facility and only 14% schools were not providing. So, they need to improve their educational programs facilities.

### 3.2.4 Teaching Learning Materials (TLM):

The educational equipments of the study are schedule board, personal desk, board, marker, routine, story book, picture book, diary, choice board, computer room, record book, playground, picture cards, book compartment, calendar, birthday chart, present and absent board, pen, paper, pencil, etc. Among those equipments investigator found that.....

TLMs name	TLMs of the schools							
	By observation							Total percentages
	Sc-1	Sc-2	Sc-3	Sc-4	Sc-5	Sc-6	Sc-7	
Schedule board	+	+	+	+	+	+	+	100% (+)
Personal desk	+	-	+	+	+	+	-	71% (+)
Marker	+	-	-	+	-	+	-	43% (+)
Routine	+	+	+	+	+	+	+	100% (+)
Story book	+	+	+	+	+	+	+	100% (+)
Diary	+	+	+	+	+	+	-	86% (+)
Picture book	+	-	+	+	+	+	-	71% (+)
Calendar	+	-	-	+	-	+	-	43% (+)
Birthday chart	+	-	-	+	-	-	-	28% (+)
Pen, pencil	+	+	+	+	+	+	+	100% (+)
Record book	-	-	+	+	-	+	-	43% (+)
Computer room	-	-	+	+	-	+	+	57% (+)
Choice board	-	-	-	-	-	-	-	100% (-)
								Average 63.29% (+)

Here (-) means not available and (+) means had available.

**Table-5: TLMs of the schools**

The table-5 shows that, by observation, among all the schools, 100% (7) schools had schedule board, routine, story book, pen, and pencil. 71% schools had personal desk. 43% schools had marker. 71% schools had picture board. 86% schools had diary. 43% schools had calendar. 29% schools had birthday chart. 43% schools had record book and 57% schools had computer as TLMs of the schools. Particularly TLMs are very important, and Hirano (2009) claimed that every special school should have those TLMs as pen, paper, pencil, schedule board, picture cards, board, marker, computer room, diary, personal desk, etc. Finally, according to the findings here in average 63.29% schools were available with available

TLMs. That’s why approximately 36% schools need to increase their TLMs for providing better educational facilities.

### 3.2.5 Learning Facilities:

From the literature and by the view of the study the learning facilities are vocational, art, dance, play events and music (Baron-Cohen and Bolton, 1993, p. 70). Among those facilities investigator found that.....

School no.	Different types of learning facilities				
	Vocational	Art	Dance	Play events	Music
School-1	+	+	+	+	+
School-2	-	+	-	+	-
School-3	+	+	-	+	+
School-4	+	+	+	+	+
School-5	+	+	-	+	+
School-6	+	+	+	-	+
School-7	+	+	+	+	+
Total percentages	86% (+), 14% (-)	100% (+), 0%	57% (+), 43% (-)	86% (+), 14% (-)	86% (+), 14% (-)

Here (-) means not available and (+) means had available.

**Table-3: Different learning facilities in school**

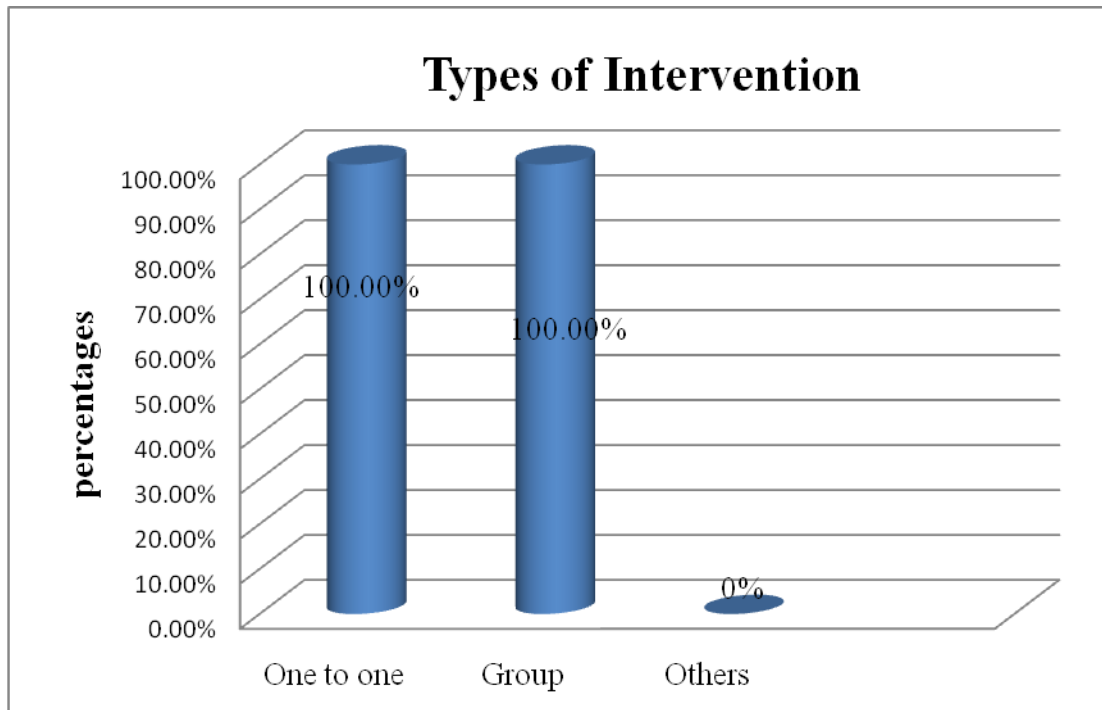
Table-3 shows that, among 7 schools, 86% (6) schools had vocational learning facility and 14% (1) had no vocational facility. All schools had art learning facility where by 57% (4) schools had dance learning facility and 43% (3) schools had no dance facility. The above diagram is also demonstrated that, 86% (6) schools had play events and music learning facilities and 14% (1) school had no play events and music learning facilities.

### 3.3 Therapy Resources

Therapy intervention and education were using together in SNS. In this study the therapy resources are types of intervention and therapy materials. These resources are pointed below with their findings and discussion.

### 3.3.1 Types of Intervention:

Different types of intervention are using in the school context and here the study shows two types of intervention like one to one and group intervention. The school can use both types of intervention like one to one and group in together.



**Figure 3: Types of Intervention**

Figure-3 shows that, among 7 schools, 100% (7) schools were giving intervention in like in one-to-one basis and group basis. The figure is also demonstrated that there had no school for giving other types of intervention.

### 3.3.2 Therapy Materials:

Therapy materials of the schools are mirror, block, picture cards, communication board, PECS, concept objects with color and shape, problem solving puzzle, gym ball, cycling, velpo board, light house, sensory stimulation cloth and ball, etc. Among those resources investigator found that.....

Resources name	Therapy Resources of the schools							
	By observation							Total percentages
	Sc-1	Sc-2	Sc-3	Sc-4	Sc-5	Sc-6	Sc-7	
Sensory stimulation cloth	-	+	+	+	+	+	+	86% (+)
Ball, rattles	+	+	+	+	+	+	+	100% (+)
Light house	+	-	-	+	-	-	+	43% (+)
Gym ball	+	+	+	+	+	+	+	100% (+)
Velpo board	+	+	+	+	+	+	+	100% (+)
Cycling	+	+	+	+	+	+	+	100% (+)
Concept object	-	+	-	-	+	-	+	43% (+)
Picture cards	-	-	-	-	+	+	+	43% (+)
Color cards	-	-	-	-	+	-	-	14% (+)
Mirror	+	-	+	-	-	-	+	43% (+)
PECS	-	-	-	-	-	-	+	14% (+)
communication board	-	-	-	-	-	-	-	0% (+)
Block	+	+	+	+	+	+	+	100% (+)
Puzzle	+	+	+	+	+	+	+	100% (+)
								Average 55.14% (+)

Here (-) means not available and (+) means had available.

**Table-6: Therapy resources in the schools**

Mostly for therapeutic intervention mirror, block, picture cards, communication board, PECS, concept objects with color and shape, problem solving puzzle, gym ball, cycling, velpo board, light house, sensory stimulation cloth and ball are more important therapy materials (Hess, Morrier, Heflin and Ivey, 2007). Here table-6 shows that, by observation, among all the schools, 100% (7) schools had ball, rattles, gym ball, velpo board, cycling, block, and puzzle. 86% schools were available with sensory stimulation cloth. 43% schools had concept object, picture cards, mirror, and light house. 14% schools had PECS and color cards and 0% schools had communication board as therapy materials. So, in average overall 55.14% schools had available therapy materials and rest of schools need to improve their therapy materials for providing better intervention facilities.

Finally, according to the investigator a special school considers a multi disciplinary team and the team members are teacher, special educationalist, psychologist, occupational therapist, speech, and language therapist, etc and they are working collaboratively. But in our country, most of the special schools have big facilities gap like not available human resources, educational resources, and therapy resources. That's why those schools need to improve these facilities for becoming evidence based practical special school.

- The study can be an information tool on school facilities for developing the model special school by improving their human resources, educational resources, and therapy materials.
- This study can be helpful for the school authorities to identify the facilities gap and try to overcome these.
- This study can be used as a conductor for guiding the Speech and Language Therapy department of CRP. Because this study ensures that how many schools had no SLT? After that, the concern person of SLT department can suggest to the school's authority for taking SLT.
- The Speech and Language Therapy department can arrange an advocacy program about the importance of speech and language therapist in special school whereby this study will be used as an advocacy tool.
- The study will be helpful for newly established special schools to develop school facilities for children with autism. Because this study has done on school facilities for children with ASD.
- If someone wants to do further study for developing a standard model for special schools, then this study will be helpful as a conductor.

Every study has some limitations, and this study has also. There were some limitations during conducting the study project. These should be keeping in mind if anyone wants to continue the further study on this project. These limitations are....

- In this study the investigator considered that only one city can be selected for the study sample. That's why it hampers the generalization of the study result.
- In this study 7 schools have taken as sample to keep the information about the school facilities. Those were very small number of samples. That's way it is not possible to generalize the study result for whole schools in the country of Bangladesh.
- The most important limitation was the lack of available literature like it was hard to find the relevant data for this study.
- The books on autism were not available there. So, most of the information was collected from the internet.
- The limited times and resources had also a great affect on the study.



If anyone wants to conduct the study regarding the school facilities for children with special needs in future. Then they can follow some mention recommendations. These are...

- Sample size should be larger.
- Try to select not only Dhaka city but also other cities of the country as a place of study. Because it will help to generalize the study result.
- Try to take long time to get overall data because long time process will help to gain better knowledge about the study.
- Merely this study has considered some autism schools. So, for further study should consider other special schools for children with special needs because it will make the research broad and standard.
- The study focused only three facilities of the special schools. So, for further study should includes other facilities.

Autism is one of the most common focusing disorders on developing country like Bangladesh. Particularly more research was done under this disorder. There this study is provided the general information on school facilities and important guidance for developing special schools for children with autism. Whatever education for children with autism is the important aspect and here needs special school for special care. Nevertheless, there are many special schools in Bangladesh, but they are not fulfilled with available facilities.

In special school, several health professionals are working for children with autism. These professionals are working for developing their social interaction, communication, speech, and daily needs activities. Substantially children with autism may participate in a wide range of intervention strategies to establish, to maintain and to change the performance skills and patterns of behaviors. The psychologist, occupational therapist and speech and language therapist are mainly working for them. The psychologist and speech and language therapist are working together in special schools for developing their social interaction, education, peer relationship, communication, speech, etc. They were applied many teaching/intervention strategies as TEACCH, PECS, Early childhood education program in school setting. The Life Education for the Autistic Person (LEAP) project is running (Ellis, 1990) in different schools for whole life.

There are comparatively wide range of types of facilities and resources varies from school to school. Here investigator found that most of the schools have sort of facilities gap like not available human resources, educational resources, and therapy resources. But those are important for improving communication, education, and other skills for children with ASD. Now, Bangladesh is a developing country and here education and health sector are developing day by day. That's why these types of study are important for developing the education sector for children with special needs. Finally, we can hope that Bangladesh may be developed under this context over 10 years later.

## Acknowledgement

Firstly, I am grateful to almighty Allah for enabling and giving me intelligence, strength, patience to complete this study. I would like to express my family member. Because they were provided positive think and inspired me to work hard and get relief from various events.

I am deeply indebted and showing my deepest gratitude to my honorable supervisor and course coordinator Md. Jahangir Alam for his appropriate guidance and positive feedback to complete this study. I am also showing my gratitude to other teacher in BHPI for their valuable and special suggestions about my study

It is my pleasure to acknowledge Fatema Akter Mitu; departmental head of Speech and Language Therapy for giving me her valuable suggestions and advice to collect samples and to develop data collection tool. I would like to give my special thanks to Nahid Parvez Tonmay for helping and guiding me by his valuable suggestion from beginning to wind up the study. I am also showing my gratitude to because they could help me to complete my pilot study on data collection tool. I would like to give thanks to Nabagata Das for helping me to complete the randomization assignment to the sample selection.

I am thankful to librarian Mosammat Mohesana, assistant librarian Syeda Akter and others Md. Rubel Dakua and Anichur Rahman to help me in collecting literature during dissertation. Then deep and sincere gratitude goes to the participatory school's principal who's were helping me to collect the data about school facilities from their schools and making the dream in a reality.

Last but not the least, thanks all those who had helped me to make this study possible. I would like to thank those persons who helped me in my study, but I cannot remember these names.

Finally, may almighty inspire all those who read this dissertation to learn and seek information to their desire needs and achieve the desirable goal successfully.

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Annexure 1

Permission Letter

Date:

To

The Course Coordinator,

Department of Speech & Language Therapy

Bangladesh Health Profession Institute (BHPI)

CRP, Chapain, Savar, Dhaka.

Subject: Prayer for seeking permission to conduct the research project.

Sir,

With due respect I state that I am a 4<sup>th</sup> year student of B.Sc. in Speech and Language Therapy Department of BHPI, the academic Institute of CRP. I am sincerely seeking permission to conduct my research project as the partial fulfillment of the requirement for the degree of B. Sc. in Speech and Language Therapy. The title of my research project is "Schools for Children with Autism Spectrum Disorder (ASD) in the Capital city of Bangladesh: perspective of available facilities". The main objective of study is to find out the facilities available in special need school for children with Autism Spectrum Disorder. Now I am seeking kindness to approve me to start the research project and I would like to assure that anything of my research project will not harmful for the participants.

So, I therefore pray and hope that your honor would be kind enough to grant me the permission of the research project conduction and this approve will help me to conduct a successful study as a part of my course.

Your Obediently,

Md. Shaikhul Hasan Nirob

4<sup>th</sup> year B. Sc. in Speech and Language Therapy,

Bangladesh Health Profession Institute (BHPI),

CRP, Savar, Dhaka.

Course Coordinator & Supervisor	Comments and Signature
Md. Jahangir Alam Course Coordinator & Lecturer Department of Speech & Language Therapy BHPI, CRP, Chapain, Savar, Dhaka- 1343	All the best wishes for you project. It is an interesting project. Hope the findings will help all the stakeholders involved with this project. <i>Md. Jahangir Alam</i> Lecturer & Course Coordinator Dept. of Speech & Language Therapy BHPI, CRP, Savar, Dhaka-1343 11/09/12



Annexure-2

Permission Letter

**Date:**

To

The Course Coordinator,  
Department of Speech & Language Therapy,  
Bangladesh Health Profession Institute (BHPI)  
CRP, Chapain, Savar, Dhaka.

Subject: Prayer for seeking permission for data collection as a part of research project conduction.

Sir,

With due respect I state that I am a 4<sup>th</sup> year student of B.Sc. in Speech and Language Therapy Department of BHPI, the academic Institute of CRP. I am sincerely seeking permission to conduct my research project as the partial fulfillment of the requirement for the degree of B. Sc. in Speech and Language Therapy. The title of my research project is "Schools for Children with Autism Spectrum Disorder (ASD) in the Capital city of Bangladesh: perspective of available facilities". The main objective of study is to find out the facilities available in special need school for children with Autism Spectrum Disorder.

Now I am seeking kindness to approve me to start data collection as a part of the research project conduction and I would like to assure that anything of my research project will not harmful for the participants.

So, I therefore pray and hope that your honor would be kind enough to grant me the permission of data collection and this permission will help me to conduct a successful study as a part of my course.

Your Obediently,

Md. Shaikhul Hasan Nirob  
4<sup>th</sup> year B. Sc. in Speech and Language Therapy,  
Bangladesh Health Profession Institute (BHPI),  
CRP, Savar, Dhaka.

Course Coordinator & Supervisor	Comments and Signature
Md. Jahangir Alam Course Coordinator & Lecturer Department of Speech & Language Therapy BHPI, CRP, Chapain, Savar, Dhaka- 1343	<i>you can start your data collection.</i> Md. Jahangir Alam Lecturer & Course Coordinator Dept. of Speech & Language Therapy BHPI, CRP, Savar, Dhaka-1343 11/09/12



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)  
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BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178, 8053662-3, Fax: 8053661

তারিখঃ ১৬.০৯.২০১২

প্রতি  
অধ্যক্ষ  
স্মাইলিং চিলড্রেন স্পেশাল স্কুল  
মধ্যবাড্ডা, লিংকরোড, গুলশান-১  
ঢাকা

বিষয়ঃ রিসার্চ প্রজেক্ট (dissertation) এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,

আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্স পরিচালনা করে আসছে।

উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর রিসার্চ ও কোর্সওয়ার্ক করা বাধ্যতামূলক।

বিএইচপিআই'র ৪র্থ বর্ষ বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্সের ছাত্র মোঃ সাইখুল হাসান তার রিসার্চ সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আপনার সুবিধামত সময়ে আপনার প্রতিষ্ঠানে সফর করতে আগ্রহী। তার রিসার্চ শিরোনাম "School facilities for children with autism spectrum disorder in the capital city of Bangladesh: Perspective of Available facilities".

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগিতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

অধ্যাপক ডাঃ এম এ কাদের

অধ্যক্ষ

বিএইচপিআই।

Mus  
18.11.12  
Mahmuda Akhter  
Principal  
Smiling Children Special School (SCSS)  
House # 3, Road # 4, Moddha Badda  
Link Road, Gulshan-1, Dhaka-1212  
Email: smilingchildren.s.s@gmail.com



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)  
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

(The Academic Institute of CRP)

CRP-Chapain, Savar, Dhaka, Tel: 7745464-5, 7741404, Fax: 7745069

BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178, 8053662-3, Fax: 8053661

তারিখঃ ১৬.০৯.২০১২

প্রতি

অধ্যক্ষ

সোসাইটি ফর দ্য ওয়েলফেয়ার অব অটিস্টিক চিলড্রেন  
পিসিকালচার, শ্যামলী, ঢাকা।

বিষয়ঃ রিসার্চ প্রজেক্ট (dissertation) এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,

আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্স পরিচালনা করে আসছে।

উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর রিসার্চ ও কোর্সওয়ার্ক করা বাধ্যতামূলক।

বিএইচপিআই'র ৪র্থ বর্ষ বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্সের ছাত্র মোঃ সাইখুল হাসান তার রিসার্চ সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আপনার সুবিধামত সময়ে আপনার প্রতিষ্ঠানে সফর করতে আহ্বান। তার রিসার্চ শিরোনাম "School facilities for children with autism spectrum disorder in the capital city of Bangladesh: Perspective of Available facilities".

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগিতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

অধ্যাপক ডাঃ এম এ কাদের

অধ্যক্ষ

বিএইচপিআই।

11.11.12  
Sabina Hossain  
Principal  
Society for The Welfare  
of Autistic Children (SWAC)



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)  
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

(The Academic Institute of CRP)

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BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178,8053662-3, Fax: 8053661

তারিখঃ ১৯.১১.২০১২

প্রতি  
অধ্যক্ষ  
আনন্দশালা অটিজম স্কুল  
জাহাঙ্গীর নগর বিশ্ববিদ্যালয়  
সাভার, ঢাকা।

বিষয় : রিসার্চ প্রজেক্ট (dissertation) এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,


আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্স পরিচালনা করে আসছে।

উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর রিসার্চ ও কোর্সওয়ার্ক করা বাধ্যতামূলক।

বিএইচপিআই'র ৪র্থ বর্ষ বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্সের ছাত্র মোঃ সাইখুল হাসান নিরব তার রিসার্চ সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আপনার সুবিধামত সময়ে আপনার প্রতিষ্ঠানে সফর করতে আশ্রয়ী। তার রিসার্চ শিরোনাম "School facilities for children with autism specturm disorder in the capital city of Bangladesh perspective of available facilities"

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগিতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

  
মোঃ জাহাঙ্গীর আলম  
কোর্স কোঅর্ডিনেটর- স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপি বিভাগ  
বিএইচপিআই।

  
Anandashala  
(A Special Needs Education Centre)  
Jahangirnagar University  
Savar, Dhaka.





বাংলাদেশ হেল্থ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই)  
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

(The Academic Institute of CRP)

CRP-Chapain, Savar, Dhaka, Tel: 7745464-5, 7741404, Fax: 7745069

BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178,8053662-3, Fax: 8053661

তারিখঃ ১৬.০৯.২০১২

প্রতি  
ব্যবস্থাপনা পরিচালক  
বিউটিফুল মাইড  
উত্তরা, ঢাকা।

বিষয় : রিসার্চ প্রজেক্ট (dissertation) এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,

আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত বিএসসি ইন স্পীচ এন্ড ল্যান্গুয়েজ থেরাপী কোর্স পরিচালনা করে আসছে।

উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর রিসার্চ ও কোর্সওয়ার্ক করা বাধ্যতামূলক।

বিএইচপিআই'র ৪র্থ বর্ষ বিএসসি ইন স্পীচ এন্ড ল্যান্গুয়েজ থেরাপী কোর্সের ছাত্র মোঃ সাইখুল হাসান তার রিসার্চ সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আপনার সুবিধামত সময়ে আপনার প্রতিষ্ঠানে সফর করতে আশ্রয়ী। তার রিসার্চ শিরোনাম "School facilities for children with autism spectrum disorder in the capital city of Bangladesh: Perspective of Available facilities".

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগিতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

অধ্যাপক ডাঃ এম এ কাদের  
অধ্যক্ষ  
বিএইচপিআই।

Leahla Sultana  
19.09.2012

Annexure-7



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)  
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)  
(The Academic Institute of CRP)

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BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178,8053662-3, Fax: 8053661

তারিখঃ ১৬.০৯.২০১২

প্রতি  
অধ্যক্ষ  
স্কুল ফর গিফটেড চিলড্রেন  
লালমাটিয়া, ঢাকা।

বিষয় : রিসার্চ প্রজেক্ট (dissertation) এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,

আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্স পরিচালনা করে আসছে।

উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর রিসার্চ ও কোর্সওয়ার্ক করা বাধ্যতামূলক।

বিএইচপিআই'র ৪র্থ বর্ষ বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্সের ছাত্র মোঃ সাইখুল হাসান তার রিসার্চ সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আপনার সুবিধামত সময়ে আপনার প্রতিষ্ঠানে সফর করতে আহ্বান। তার রিসার্চ শিরোনাম "School facilities for children with autism spectrum disorder in the capital city of Bangladesh: Perspective of Available facilities".

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগিতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

অধ্যাপক ডাঃ এম এ কাদের  
অধ্যক্ষ  
বিএইচপিআই।

Marufa Hossain  
Director  
School for Gifted Children  
(A Special Needs School)

Annexure-8



বাংলাদেশ হেল্থ প্রফেশন্স ইনষ্টিটিউট (বিএইচপিআই)  
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BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178, 8053662-3, Fax: 8053661

তারিখঃ ১৯.১১.২০১২

প্রতি  
ব্যবস্থাপনা পরিচালক  
আলোকিত শিশু  
শেখেরটেক, মোহাম্মদপুর, ঢাকা।

বিষয়ঃ রিসার্চ প্রজেক্ট (dissertation) এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,

আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশন্স ইনষ্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্স পরিচালনা করে আসছে।

উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর রিসার্চ ও কোর্সওয়ার্ক করা বাধ্যতামূলক।

বিএইচপিআই'র ৪র্থ বর্ষ বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্সের ছাত্র মোঃ সাইখুল হাসান নিরব তার রিসার্চ সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আপনার সুবিধামত সময়ে আপনার প্রতিষ্ঠানে সফর করতে আশ্রয়ী। তার রিসার্চ শিরোনাম “School facilities for children with autism specturm disorder in the capital city of Bangladesh perspective of available facilities”

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগীতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

*Zahidul Alam*  
19.11.12

মোঃ জাহাঙ্গীর আলম  
কোর্স কোঅর্ডিনেটর- স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপি বিভাগ  
বিএইচপিআই।

*Permitted for data collection*  
*Zahidul Alam*  
07/11/2012  
Md Zahir Uddin Akanda  
Founder & Chairperson  
ALOKITO SHISHU  
Shekher Tek, Mohammadpur,  
Dhaka-1207

Annexure-9



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)  
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)  
(The Academic Institute of CRP)

CRP-Chapain, Savar, Dhaka, Tel: 7745464-5, 7741404, Fax: 7745069  
BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178,8053662-3, Fax: 8053661

তারিখঃ ১৬.০৯.২০১২

প্রতি  
অধ্যক্ষ  
অটিজম ওয়েলফেয়ার ফাউন্ডেশন  
রিংরোড, মোহাম্মদপুর, ঢাকা

বিষয় : রিসার্চ প্রজেক্ট (dissertation) এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,

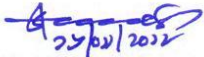
আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্স পরিচালনা করে আসছে।

উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর রিসার্চ ও কোর্সওয়ার্ক করা বাধ্যতামূলক।

বিএইচপিআই'র ৪র্থ বর্ষ বিএসসি ইন স্পীচ এন্ড ল্যাঙ্গুয়েজ থেরাপী কোর্সের ছাত্র মোঃ সাইখুল হাসান তার রিসার্চ সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আপনার সুবিধামত সময়ে আপনার প্রতিষ্ঠানে সফর করতে আশ্রয়ী। তার রিসার্চ শিরোনাম "School facilities for children with autism spectrum disorder in the capital city of Bangladesh: Perspective of Available facilities".

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগিতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

  
২১/০৯/২০১২

অধ্যাপক ডাঃ এম এ কাদের  
অধ্যক্ষ  
বিএইচপিআই।





## Annexure-10

### সম্মতি পত্র

আমি গবেষক মো: সাইখুল হাসান নিরব “বাংলাদেশ হেলথ প্রফেশন ইনস্টিটিউট” ঢাকা বিশ্ববিদ্যালয় এর বিএসসি ইন স্পীচ এন্ড ল্যান্ডস্কেপ থেরাপী কোর্সের চূড়ান্ত বর্ষের অধ্যয়নরত একজন ছাত্র। আমি একটি ব্যাচেলর প্রজেক্টের জন্য “বাংলাদেশের রাজধানী ঢাকায় অবস্থিত অর্টিজমে আক্রান্ত বাচ্চাদের বিদ্যালয় : উদ্দেশ্য পর্যাপ্ত সুযোগ সুবিধা” এই বিষয়ের উপর গবেষণা করছি। আলোচনার/পর্যবেক্ষণের সময় ২০ থেকে ২৫ মিনিট।

গবেষক সাক্ষাৎকারে অংশগ্রহণের জন্য অংশগ্রহণকারীর অনুমতি নিবেন। এমনকি সাক্ষাৎকারে প্রাপ্ত তথ্যাদি কারো সাথে আদান প্রদান করা হবে না। সেই সাথে উক্ত গবেষণায় অংশগ্রহণের ফলে অংশগ্রহণকারীর কোন ক্ষতি হবে না। সাক্ষাৎকারের সময় অংশগ্রহণকারী সকল প্রশ্নের জবাব এবং উপদেশ পালন করতে বাধ্য থাকবেন না। গবেষক অংশগ্রহণকারীদের তথ্যাদির গোপনীয়তা রক্ষা করবেন এবং অংশগ্রহণকারী যেকোন সময় গবেষণা থেকে তার সম্মতি প্রত্যাহার করতে পারবেন।

আপনার যদি কোন কিছু জানার থাকে তাহলে অংশগ্রহণকারী হিসেবে আপনার অধিকার যে আপনি যোগাযোগ করতে পারেন গবেষকের সাথে।

আলোচনা শুরু আগে, আপনার কি কোন প্রশ্ন আছে?

আলোচনার জন্য আমি কি আপনার অনুমতি পেতে পারি?

হ্যাঁ  না

অংশগ্রহণকারীর নাম সাক্ষর ও তারিখ

.....

গবেষকের সাক্ষর ও তারিখ

.....

Annexure-11

**Checklist**

Name of the school:

Contact person:

Address:

Mobile Number:

When was the school established?


How many professionals are at your school?

Teacher	Social worker	SLT	PT	OT	Psychologist	Others (specify....)	Total

What is the qualification of different professionals?

Teacher	Social worker	SLT	PT	OT	Psychologist	Others (specify....)

What teaching methods are you following in your classroom?

Lecture	Demonstration	Focus group discussion	Role play	Story telling	Mixed	Others (specific....)

What types of teaching aids does your school use in classroom?

Overhead projector	Video tape	Board and marker	Multimedia	Poster and picture card	Mixed	Others (specify....)

What intervention method do you follow in your school?			
One to one therapy	Group therapy	Both	Others (specific....)

What is the teacher student ratio in every classroom?					
1:1	1:2	1:3	2:4	1:4	Others (specify....)

Does the school follow any special curriculum?	
Yes	No

Does the school teaching/encourage the use of sign language?	
Yes	No

Do you think in your school have sufficient no. of educational resources?	
Yes	No

If yes, then would you please tell me name of those.....

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Do you think in your school have adequate therapy materials?	
Yes	No

If yes, then would you please tell me name of those.....

- 
- 
- 
- 
- 
- 
- 
- 
- 
- 

Does your school have any outreach educational program for the students?	
Yes	No

If yes, then would you please tell me name of those.....

- 
- 
- 
- 
- 

What types of learning facilities does your school have?					
Vocational	Art	Dance	Play events	Mixed	Others (specify....)

Participant's Signature and date

.....

Sign and date of the investigator

.....