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# BRAC-UBS *Shishu Niketan* School Project A Baseline Report

Samir Ranjan Nath  
Nowreen Yasmin  
Anwar Hossain

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**Research and Evaluation Division**  
BRAC Centre, 75 Mahakhali, Dhaka 1212, Bangladesh  
E-mail: [research@brac.net](mailto:research@brac.net), [www.brac.net](http://www.brac.net)  
Telephone: 9881265, 8824180-87

For more details about the report, please contact: [nowreen.yasmin@brac.net](mailto:nowreen.yasmin@brac.net)

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## **Abbreviations**

BEP	BRAC Education Programme
BIED	BRAC Institute of Educational Development
KG	Kindergarten
LCPS	Low Cost Private Schooling
NCTB	National Curriculum and Textbook Board
RED	Research and Evaluation Division
SDG	Sustainable Development Goal
UBS	UBS Optimus Foundation
UK	United Kingdom

## EXECUTIVE SUMMARY

BRAC Education Programme (BEP) in collaboration with BRAC-UK has established 15 low-cost, fee-paying schools called *Shishu Niketan* in 15 district towns of Bangladesh. The objective of this initiative is to provide quality primary education to the children of low-income families. The UBS Optimus Foundation is the development partner of this project. BEP is the implementing agency in collaboration with BRAC Institute of Educational Development (BIED). Duration of this collaboration is 41 months starting from August 2016.

According to the project proposal three grades viz., pre-primary, grade I and grade II are supposed to be opened in each school in January 2017. After one year, the students will be promoted to the next grades and a new batch of pre-primary students will be admitted. The number of students in each grade was proposed to be 32. The number of teachers would be four in each school, one of whom is a head teacher. One new teacher would be recruited in each year. During the implementation of this project, a total of 105 teachers will be recruited, and 2,970 students will be admitted to these schools.

Research and Evaluation Division (RED) of BRAC is the research partner of this project. As part of an evaluation of this project, RED will collect various information throughout the implementation period. This report presents the findings of baseline research on this *Shishu-Niketan* School project. Fieldwork for this was carried out in June 2017.

Considering the fee-paying nature of *Shishu Niketan* and simultaneous operation of various grades in different classrooms, private multi-room kindergartens were considered as comparable schools for the evaluation. All 15 *Shishu Niketan* schools and a similar number of kindergartens located close to those were, therefore, the subjects. In the baseline, data were collected from all the 30 schools and households of 882 students admitted in the three grades of these two types of schools. Household and school surveys were done. Moreover, teachers were interviewed to know about the training provided to them.

All the 15 *Shishu Niketan* started on time in January 2017 but not each of the grades in all schools. By May 2017, 16 pre-primary sections were opened in 14 schools, 17 sections of grade I in 15 schools and 12 sections of grade II in 12 schools. Out of 1,440 students supposed to be admitted in 2017, only 48% admitted by the first month. Till the end of May, the figure increased to 81.7%. The gap between expected and admitted number of students was 0.6 percentage point in pre-primary, 10.8percentage points in grade I and 43.5percentage points in grade II.

A tendency to admit under-aged children in pre-primary and over-aged children in rest two grades was observed in *Shishu Niketan* schools. Kindergartens admitted over-aged children in each of the three grades. The proportion of girls was more in *Shishu Niketan* schools than in kindergartens (47.8% versus 43.8%). Socioeconomic background of the students of kindergartens was comparatively better than those of *Shishu Niketan* schools in terms of income and asset of households and parental education. Out of pocket, expenditure for the education of

the students of *Shishu Niketan* schools was more than double of that of the students of kindergartens. The major difference in expenditure occurred in cost for private tutoring. Whereas two-thirds of the students of kindergartens availed private tutoring, it was 13.3% among the students of *Shishu Niketan* schools. The parents admitted their children to fee-paying schools with an expectation of quality of education and holding classes on a regular basis.

*Shishu Niketan* schools recruited female teachers only, but kindergartens had male teachers too. Educational qualifications of the teachers of *Shishu Niketan* schools were more than that of the kindergartens. Majority of the assistant teachers of *Shishu Niketan* schools had a Bachelor's degree, and head teachers had a Master's degree. Kindergarten teachers were more experienced than the *Shishu Niketan* teachers. All the teachers of *Shishu Niketan* schools had basic teacher training, which was not in the case of kindergarten teachers. Proportionately more teachers of kindergartens were involved in other income generating activities including private tutoring than their counterparts in *Shishu Niketan* schools. *Shishu Niketan* teachers were facing a new challenge in using the new technology in classrooms.

Following are some of the issues that BEP can consider.

- Students should have the right to admit in age-appropriate grades. Careful screening of age of children and admission of them in age-appropriate grades are therefore the tasks for BEP in upcoming admission session.
- Proper monitoring of the classroom teaching-learning should be done regularly in order to facilitate and improve the use of multimedia and other activities. These are very much needed for honouring parental expectation from these schools.
- Follow up training of *Shishu Niketan* teachers should be based on the needs assessment, classroom observation and supervision reports to make the classroom teaching-learning provision more functional and efficient.
- There should be a provision to know from the students about the arrangements and care to them and to take care of their concerns.

## **1.1 Background**

The primary education sector of Bangladesh has seen numerous achievements in terms of enrolment and gender equity over the past two decades (Nath & Chowdhury 2009; Nath, 2013). Nevertheless, to align the country with the fourth Sustainable Development Goal (SDG 4), it is high time to concentrate beyond enrolment and ensure quality at the primary level. Several challenges exist in ensuring the quality in general and for the poor and marginalised students in particular. The private education is mostly considered as an option for the elite and middle-class people, not for the poor. However, an emergent body of evidence shows that although challenging, quality private education can be a prospective option for poor (Tooley & Dixon, 2005; Mcloughlin, 2013). Therefore, the practice of low-cost private schooling (LCPS) has taken much attention since the last decade in different parts of the world, especially in the developing countries. Underlying the fact of declining quality of public education and expensive private option, a growing number of parents is choosing private education for their children. Bangladesh is not an exception in this regard.

The concept of LCPS rightly addresses the call for quality education. Evidence prevail on how LCPS maintains the quality of education over the government alternatives (Tooley, 2015; Tooley & Longfield, 2015). However, there is controversy regarding equity implications of private schooling. With a view to ensuring more inclusive approach, LCPS aims to provide private alternatives to the lower income group. It is argued that low-cost private schools be affordable to families on the poverty line; they also enhance opportunities for girls. They are compatible with 'Education for All', provided that targeted assistance be taken for those currently unable to avail themselves of private education (Tooley& Dixon, 2005).

BRAC has yearlong experiences of pursuing innovative intervention in the different sector of development. Thus, BRAC Education Programme (BEP) has undertaken a pilot project of LCPS particularly targeting the section of society who cannot afford the existing private kindergarten schools. In 2016, BEP initiated this pilot project of fee-paying schools (called *Shishu Niketan*) with the funding from the UBS Optimus Foundation to help bridge the quality primary education gap for children from low income families. In this pilot phase, BEP established 15 schools in 15 district towns of Bangladesh. The project duration is 41 months from August 2016. This includes preparatory activities for five months and school operation for three academic years (3 x 12 = 36 months). Thus, the proposed project period is from 1 August 2016 to 31 December 2019.

BRAC UK and BEP pioneered this project in collaboration with BRAC Institute of Educational Development (BIED) and UBS Optimum Foundation. Before this, no other intervention had introduced multimedia classroom at the primary level, simultaneously maintaining low cost. Additionally, BRAC has taken this initiative at district level whereas such equipped classroom cannot be found and only be found in the cities. Unlike other school projects of BEP, this project



has established the multi-room premise, exclusively focusing on quality education and improving educational outcomes. This project targets to bridge the quality primary education gap for children from low-income families in district level urban areas of Bangladesh. The unique feature of UBS-BRAC *Shishu Niketan* project is to pioneer multimedia classroom and digital content for all grades at the primary level to unleash and facilitate the quality teaching learning practice. Previous studies have identified various advantages of multimedia facilities in primary classroom in terms of creating an effective learning environment and achieving learning outcomes (Ilhan & Oruç, 2016; Tudor, 2012). However, the impact of multimedia greatly depends on the fact of how a teacher can integrate these technologies with the teaching learning techniques (Tudor, 2012). It indicates the significance of teacher's level of expertise in implementing and integrating the multimedia facility within classroom activities (Roncovic, 2009).

Under this project, BRAC established multi-classroom schools in rented houses. Academic activities initially started with the students of three grades: Nursery, grade I and grade II. Initially, each school was supposed to have 96 students equally distributed by grade. A new batch of nursery students was planned to admit in each school annually and existing students to be promoted to the next grade. On an average, the planned class size is 32. The national curriculum adopted by the National Curriculum and Textbook Board (NCTB) is planned to follow, supplemented by workbooks, multimedia materials and an active/participatory teaching style taught to all teachers. As per the plan, a total of 105 teachers will be recruited, and 2,970 students will be admitted to these schools during the implementation period (2017-2019).

There is a proposal, in this project, to charge the monthly tuition fees from BDT 300-500 per student with the yearly inflation rate. The monthly tuition fees equate to approximately 5% of monthly expenditure of the households with an average monthly income of BDT 6,000–10,000; therefore, the fees are expected to be affordable even for the lowest income quintile. It is also expected that the 15 schools will be commercially viable after three years of operations and will continue to provide quality education on a sustainable basis. During the first three years of operation, amount of money generated from the staggered opening of classes will increasingly support the operations of the schools. The project targets 9.84% cost recovery in the first year, 49.43% in the second year and 93.17% in the third year. After three years of implementation, monetary worth received through fees are expected to exceed core operational costs including school house rent, utilities, salaries and maintenance, with a targeted 116.73% cost recovery in the fourth year of operation. In addition, it is expected that 2,970 children will avail improve learning outcomes as a result of accessing to quality education. Furthermore, standard of teaching will be higher, with the teachers' ability to demonstrate the knowledge and skills to practice child-centred and interactive teaching-learning strategies. Consequently, the parents and children will be satisfied with the quality of education. This pilot project requires a thorough evaluation to understand the extent and aftereffect of the above expectations throughout the project period.

Research and Evaluation Division of BRAC is conducting the impact evaluation of this project. The objective of this evaluation is to assess the impact of *Shishu Niketan* schools at outcome and output level. This includes to what extent the project has improved learning outcomes of the children and whether 15 schools are economically stable after three years of operation. This impact study will be carried out through three years of the project period in different phases. This will be done by a comparative evaluation strategy. This research is the baseline of this impact study. Along with the 15 *Shishu Niketan* schools, the same number of kindergartens located close to them were considered as the comparative group. Therefore, the total number of schools under this impact study is 30.

This baseline study is the first one of a series of initiatives of the impact study, and this report provides the details of the baseline status of BRAC-UBS *Shishu Niketan* School Project. A previous research identified the lack of research evidence stating that ‘there is still a lack of data and comparative analysis on education outcomes to be able to assess value for money from the government perspective and for prospective students and their families to distinguish between high-quality and low-quality public and private providers’ (DFID, 2013). Therefore, the findings of this study will address the research gap and will provide evidence of the effectiveness of LCPS project in the context of developing countries like Bangladesh.

## **1.2 Objective and Research Questions**

The objective of this baseline study was to explore the status of the *Shishu Niketan* schools comparing with the kindergartens of the same locality during the project initiation period. This includes exploring to what extent the project has been able to setup according to the plan. This report presents the results of baseline study under the following research questions:

1. What is the status of schools (both *Shishu Niketan* and kindergarten) in terms of infrastructure, teacher qualification, student's enrolment and attendance?
2. What is the socio-economic background of the teachers and students of *Shishu Niketan* and kindergartens during the initiation period of the project?
3. What is the proportion of the students present at the classrooms in a regular day, and what is the dropout rate?

## CHAPTER 2 METHODOLOGY

### 2.1 Research Design

A comparative evaluation strategy was considered to evaluate this project. Considering the tuition-fee paying nature of the *Shishu Niketan* in addition to the simultaneous teaching of various grades of students in different classrooms, private multi-room kindergartens are the most comparable education provider in Bangladesh. All 15 schools and the same number of kindergartens located close to those were considered for this study. Therefore, the total number of schools under this evaluation was 30. These 30 schools will be under the evaluation process over the three years project period. A mixed method (qualitative and quantitative) will be used in this evaluation. This baseline study, which was carried out from the end of May 2017 to July 2017, was the first step of the evaluation process of BRAC-UBS *Shishu Niketan* School Project.

According to the evaluation plan, all issues related to the evaluation questions were explored for both types of school except teachers' training part as there was no comparable training received by the kindergarten teachers. Only quantitative method was followed in the baseline study. The plan was to randomly select ten students from each grade of each school; therefore, 30 students from each school- totalling 450 students from each type of school and 900 for both types. The procedure was followed as planned. In some classes, 10 students were not available. This incident was mostly happened in the kindergartens. The student sample size finally determined at 882, where 446 from *Shishu Niketan* and 436 from kindergartens (Table 1). The number of boys were more than the girls.

Table 1. Sample size by school type and gender

School type	No. of schools	Gender		Total
		Boys	Girls	
<i>Shishu Niketan</i>	15	234	212	446
Kindergarten	15	231	205	436
Total	30	465	417	882

### 2.2 Data Collection Instrument

Data were collected from schools and the households of the students. Therefore, two different survey instruments were employed. The school survey questionnaire covered various aspects related to school infrastructure, teacher's profile, the gender ratio of students, attendance and other factors. Following the school survey, household of the selected students from each school were surveyed. The household survey questionnaire covered-age and gender distribution of household members, parent's education, employment status of parents, household income status, student's previous educational experience, and tutoring support available for the students.

## THE SHISHU NIKETAN SCHOOLS AND KINDERGARTENS

Comparative analysis of the situation of both types of school (*Shishu Niketan* and kindergarten) were carried out for a better understanding of the initiation status of those. As discussed in the previous section, there were 15 schools of each type. This section provides information on various factors related to the schools and teachers. Two different sections are prepared based on-school infrastructure, school facilities, tuition fees, student's attendance, teacher's educational qualification, their training and teaching experience, use of multimedia etc.

### 3.1 School Profile

#### *Location and time of school establishment*

Two-thirds of the *Shishu Niketan* schools and 60% of the kindergartens were located in the urban areas. Whether all the *Shishu Niketan* were established in 2017, the kindergartens were established during the period of 1995 to 2015.

Distance between the *Shishu Niketan* and their comparable kindergartens were collected. The comparable kindergartens were within half kilometre in the case of five *Shishu Niketan*, three were within one kilometre, one was within one-and-a-half kilometre, five were within two kilometres, and one was within five kilometres. In most cases, the nearest kindergartens were selected which expressed their consent to participate in the research for three years.

#### *Grades provided by the school*

The *Shishu Niketan* schools were supposed to have three classes in each – pre-primary, grade I and grade II. Again, admission of students in these classes was ideally be completed by January. None of these were perfectly happened. By January 2017, pre-primary was commenced in 10 schools, grade I in eight schools and grade II in nine schools (Table 2). However, there were 12 sections for pre-primary, 10 sections for grade I and nine sections for grade II in these schools. Out of 45 classes (15 schools x 3 grades), about 69% was commenced on right time (in January). The situation has increased over the period, and all 45 classes were set-up by May.

Table 2. Number of schools and sections opened in *Shishu Niketan* schools by month and grade

Months	Pre-primary		Grade I		Grade II	
	No. of schools	No. of sections	No. of schools	No. of sections	No. of schools	No. of sections
January	10	12	8	10	9	9
February	12	14	12	14	9	9
March	13	15	13	15	9	9
April	14	16	15	17	12	12
May	14	16	15	17	12	12

Not all *Shishu Niketan* had three grades in each by May 2017, when the fieldwork for this baseline study was carried out. All three grades were not commenced in over a quarter of the schools (26.7%) by May. Out of 15 schools, each of the three grades was commenced in 11. Pre-primary was not found in one school and grade II in three schools. Instead of pre-primary, two sections of grade I was commenced in that school. Instead of grade II, two sections of pre-primary were commenced in two schools and two sections of grade I were commenced in one school.

On the other hand, most of the kindergartens had playgroup and nursery grades. The kindergartens provided education from pre-primary to the final grade of secondary education (grade X). Of the 15 kindergartens, 12 had single section for pre-primary and grade I and three schools had two sections in each of these grades. Thirteen of these schools had single section for grade II, and two had two sections each. In other words, there were 18 sections for pre-primary and grade I each, and 17 sections for grade II in 15 kindergartens.

#### *Infrastructure of school building and classroom*

All the *Shishu Niketan* school buildings were rented-in from individuals. On the other hand, school buildings of kindergartens had different types of ownership: owned by individual, institution or a committee. Adequate number of classrooms was found in 13 *Shishu Niketan* schools. Rest two had some deficiencies. A minimum of four to a maximum of 14 classrooms were observed in the kindergartens.

Floors and the walls of the *Shishu Niketan* schools were made of bricks and the roofs made of corrugated tin-coated iron sheets. Kindergartens were made of varieties of materials. Majority of them were entirely made of corrugated tin-coated iron sheets and fence, and two were fully brick built (Annex 1).

All the *Shishu Niketan* schools and 13 kindergartens had electricity facility. The playground was observed in 13 schools of each type.

### *Cleanliness of school and classroom*

No dust or waste paper was seen on the floors of 86.7% of the schools of each type. Walls were found clean in 60% of the *Shishu Niketan* and 53.3% of the kindergartens. Surrounding environment of 73.3% of the schools of each type was observed as calm and quite (Annex 1).

### *Monthly tuition fees*

The two types of schools varied in terms of monthly tuition fees of students. In *Shishu Niketan*, BDT 300 was charged for the pre-primary students, BDT 300 or 350 for the students of grade I and BDT 300, 350 or 400 for the students of grade II. Kindergartens widely varied in this regard. For the pre-primary students, monthly tuition fees varied from BDT 100-500, and it was from BDT 100-600 for the students of the rest two grades. The average monthly tuition fee for the pre-primary students of *Shishu Niketan* was BDT 300; it was BDT 340 for the students of grade I and BDT 386 for the students of grade II. These figures were BDT 243, 265 and 294, respectively for the students of kindergartens.

### *Teachers' salary*

Monthly salary of most of the head teachers of *Shishu Niketan* was BDT 5,000. It was BDT 4,000 for the assistant teachers of the similar institutions. Only one head teacher and three assistant teachers' got BDT 200 more than the above. On the other hand, huge variation was observed in the monthly salary of the kindergarten teachers. The range of it was from BDT 1,000-15,000 for the head teachers and BDT 600-4,000 for the assistant teachers. The average salary of kindergarten head teachers' was BDT 5,393 and assistant teachers were BDT 2,188. Only four head teachers of kindergartens got BDT 10,000, or more and others got BDT 5,200 or less.

### *Water and sanitation facilities available in school*

Information on water and sanitation facilities was collected. Fourteen *Shishu Niketan* schools had tube-wells, and the rest had no facility for water during the time of data collection. In case of kindergartens, either tap water or tube-wells were found in all schools. Both types of the school had safe drinking water facility. Water source in 12 *Shishu Niketan* schools and 13 kindergartens was observed within the school compound. The provision of water filter was observed in 12 *Shishu Niketan* schools compared to three kindergartens.

Restroom for students was observed in 13 *Shishu Niketan* and all the kindergartens. These 13 *Shishu Niketan* had sanitary latrine. Four *Shishu Niketan* schools and 10 kindergartens had washing facility for students. Additionally, seven *Shishu Niketan* schools and 10 kindergartens had separate washroom for teachers.

### *Availability of different materials for co-curricular activities*

Specific school dress for the students was observed in each of the schools of both the types. The national flag was seen hoisted in 12 *Shishu Niketan* schools and 11 kindergartens. In addition, 14 *Shishu Niketan* and 10 kindergartens regularly practised parade and students performed (sang) national anthem every day before the start of official contact hour.

Various types of learning materials were found in the *Shishu Niketan* schools. These include materials for dance, singing, drama, and play. Necessary materials for art-work were found in nine *Shishu Niketan*. On the contrary, such materials were lacking in most of the kindergartens.

### *Status of parents and school management committees*

BEP has planned setting up of parents committee and school management committee (SMC) in each of the *Shishu Niketan*. Both of these were present in nine *Shishu Niketan* schools and 13 kindergartens. There was no female member in one SMC. SMC meeting was held during the first five months (January-May) only in three *Shishu Niketans*. On average, more meetings were held in kindergartens than in the *Shishu Niketan*. Documentation of meeting minutes was observed in four *Shishu Niketans* and three kindergartens.

Another important feature of schools is to arrange parents meeting. Parents meeting was arranged in all the *Shishu Niketan* schools and 14 kindergartens. In most cases (in 13 schools), such meetings were arranged taking the parents of all three grades together. There were 2-6 meetings in most of the schools. The teachers documented the meeting minutes in nine *Shishu Niketans* and three kindergartens. Commonly, three topics were included in the agenda for discussion; these are importance of regular attendance of students, payment of monthly tuition fees on a regular basis, and other issues.

### *Monitoring and management by staff*

The *Shishu Niketan* teachers were asked about school monitoring by the Programme Organizers (PO) and the Area Managers (AM). A positive response was observed in both the cases. They made regularly scheduled visits and also went to schools whenever it seemed necessary to them. In the majority of the cases, the main reason of their visit was to supervise the construction of school building, taking a note on collection of monthly tuition fees and participation in parents meeting.

### *Admission of students*

The *Shishu Niketan* schools were started in January 2017 with 325 students in pre-primary, 220 students in grade I and 146 students in grade II (Table 3). The number of students gradually increased the following months and reached 477 in pre-primary, 428 in grade I and 271 in grade II by May 2017. This means that starting with a total of 691 students in January 2017, the figure stood at 1,176 in May 2017. Overall increase was 70 percentage points – 47 percentage points in pre-primary, 95 percentage points in grade I and 86 percentage points in grade II. The number of

students admitted in *Shishu Niketan* schools by May 2017 was 18.3 percentage points less than that was planned to admit. Grade-wise, it was 0.6 percentage points in pre-primary, 10.8percentage points in grade I and 43.5percentage points in grade II.

Table 3. Number of students by months, grade and school type

Months	Pre-primary		Grade I		Grade II		Total	
	Shishu Niketan	Kinder-garten	Shishu Niketan	Kinder-garten	Shishu Niketan	Kinder-garten	Shishu Niketan	Kinder-garten
January	325	331	220	359	146	364	691	1,054
February	377	328	298	352	154	366	829	1,046
March	401	324	343	356	169	362	913	1,042
April	463	328	413	359	260	360	1,136	1,047
May	477	327	428	351	271	362	1,176	1,040

On the other hand, not much variation was observed by month in number of students in the kindergartens. In January 2017, total number of students in these three grades of 15 kindergartens was 1,054 (331 in pre-primary, 359 in grade I, and 364 in grade II). This figure reduced to 1,040 in May 2017 (327 in pre-primary, 351 in grade I, and 362 in grade II).

It was surprising to see a decreasing trend in the number of kindergarten student. On the other hand, in some cases, infrastructure of the *Shishu Niketan* schools were built, but students could not be admitted; the situation was other way around in some other cases. Overall, *Shishu Niketan* took much time to complete admission and it was still incomplete up to the end of May 2017.

#### *The girls' proportion*

In May 2017, the proportion of girls was 47.8% in *Shishu Niketan* and 43.8% in the kindergartens (Table 4). Month-wise variation in the proportion of girls was higher in *Shishu Niketan* schools than in kindergartens. It varied from 46-49% in *Shishu Niketan* and 43-44% in kindergartens. Whether it is by month or grade, the figures were higher for *Shishu Niketan* than the kindergartens. Noticeably a lower proportion of girls admitted in grade I of kindergartens. In *Shishu Niketan* schools, the proportion of girls was over 46% in pre-primary and grade I each and it was 51.9% in grade II. In kindergartens, the figure was 47.1% in pre-primary, 38.5% in grade I and 46.2% in grade II.



Table 4. Percentage of girls by months, grade and school type

Months	Pre-primary		Grade I		Grade II		Total	
	Shishu Niketan	Kinder-garten	Shishu Niketan	Kinder-garten	Shishu Niketan	Kinder-garten	Shishu Niketan	Kinder-garten
January	45.5	45.0	44.5	38.2	49.3	45.6	46.0	42.9
February	46.2	45.1	48.7	38.1	51.9	45.4	48.1	42.8
March	46.1	45.4	47.2	38.5	52.7	45.6	47.8	43.1
April	49.0	45.7	47.2	39.0	51.9	45.6	49.0	43.4
May	46.8	47.1	46.5	38.5	51.7	46.2	47.8	43.8

Whereas, at the national level, the proportion of girls is higher than that of the boys at each grade of the primary; this was not the case in any of the school types under this study. Why the parents were less interested in sending their girls to admit in these schools needs further exploration.

#### *Density of students*

Student-school and student-section ratios were calculated. As obvious, the former was always higher than the later in both types of schools (Table 5). Whereas, both the ratios gradually decreased with the increase of grade in *Shishu Niketan*, an inverse trend was observed in the case of kindergartens. Therefore, the ratios were much lower in the pre-primary grade of kindergartens than that of *Shishu Niketan* schools. The gap gradually declined with the increase of grade.

Table 5. Student-school and student-section ratio by grade and school type, May 2017

Grades	Student-school ratio		Student-section ratio	
	Shishu Niketan	Kindergarten	Shishu Niketan	Kindergarten
Pre-primary	34.1:1	21.8:1	29.8:1	18.2:1
Grade I	28.5:1	23.4:1	25.2:1	19.5:1
Grade II	22.6:1	24.1:1	22.6:1	21.3:1

#### *Classroom attendance*

Number of students attended in school was found through headcount on the day of school survey, and the rate was calculated dividing this number by the number of students registered and multiplied by 100. The rates are provided in Table 6. Not much variation was observed by school type. On average, three-quarters of the students of *Shishu Niketan* were present on the counting day which was 75.9% among the students of kindergartens. The attendance rates of pre-primary students in both the school types were close to each other. The rate was higher for the first graders of *Shishu Niketan* than their counterparts in kindergartens; however, an opposite scenario was observed among the second graders. The attendance rate for the boys of *Shishu*

*Niketan* schools was two percentage points higher than the girls of the similar institutions. However, gender-wise rates were closer to each other in the case of kindergarten students.

Table 6. Attendance rate by grade, gender and school type

Grades	Boys		Girls		Both	
	Shishu Niketan	Kinder-garten	Shishu Niketan	Kinder-garten	Shishu Niketan	Kinder-garten
Pre-primary	79.0	81.0	76.4	73.3	77.8	78.1
Grade I	76.3	65.6	76.4	77.2	76.4	71.0
Grade II	73.2	80.3	70.4	77.3	71.9	78.9
Total	76.0	75.7	74.0	76.1	75.1	75.9

Additional information was collected by asking the parents about the number of days the students were present at school in the past seven days. Out of seven days, the students of *Shishu Niketans* were present for 5.85 days, and the students of kindergartens were present for 5.95 days. The attendance rate stood at 83.5% for the students of *Shishu Niketan* and 85.1% for those of kindergartens. Although the rates were similar for the boys and girls of kindergartens, a small difference was observed in favour of boys in the *Shishu Niketan* schools. None of these differences were statistically significant.

#### Contact hour

Mean schooling hour was explored. *Shishu Niketan* schools had significantly longer contact hour than the kindergartens (Table 7). The average contact hour in the *Shishu Niketan* schools was 3.2 hours for pre-primary, four hours for grade I and 4.2 hours for grade II. These figures were 2.3, 2.7 and 3.0 hours respectively for the students of kindergartens.

Table7. Mean schooling hour by grade and school type

Grade	School Type	Number of school	Mean	Standard deviation	Level of significance
Pre-primary	Shishu Niketan	14	3.2	.62	p<0.001
	Kindergarten	15	2.3	.38	
Grade I	Shishu Niketan	15	4.0	.58	p<0.001
	Kindergarten	15	2.7	.73	
Grade II	Shishu Niketan	12	4.2	.58	p<0.001
	Kindergarten	15	3.0	.80	

### *Digital content and Multimedia activities*

Multimedia classrooms and use of digital content were some unique features of *Shishu Niketan* schools. Use of multimedia and digital content was explored in 12 pre-primary, 13 grade I and 10 grade II classrooms in *Shishu Niketans*. On average, 16 lessons of each of pre-primary and grade I and 15 lessons of grade II were held using multimedia based on the self-reported data provided by the teachers of last three months activities.

### **3.2 Teacher profile**

The *Shishu Niketan* schools under study had 60 teachers and kindergartens had 153 teachers. All the teachers of *Shishu Niketan* and only those teachers of kindergartens who were teaching in the three grades under study as class teachers and the heads of the institutions were considered for investigation. Head teacher was the class teacher in a kindergarten. Therefore, 60 teachers of *Shishu Niketan* and 59 of kindergartens were analysed.

All the teachers of *Shishu Niketan* schools were female. The proportion of female teacher was 78% in the kindergartens – 46.7% among the heads and 88.6% among assistant teachers. The mean age of the heads of the *Shishu Niketan* schools was 28.6 years, and it was 43.5 years among those in the kindergartens (Table 8). On average, the assistant teachers of the *Shishu Niketan* schools were 26.7 years, and it was 29 years among those of the kindergartens. Head teachers of the kindergartens were much elder than all other teachers under study. The difference was also observed in teaching experience. While head teachers of kindergartens had, on average, 17.3 years of teaching experience; it was 3.7 years among those in *Shishu Niketan* schools.

Table 8. Mean age and year of teaching experience by school and teacher type

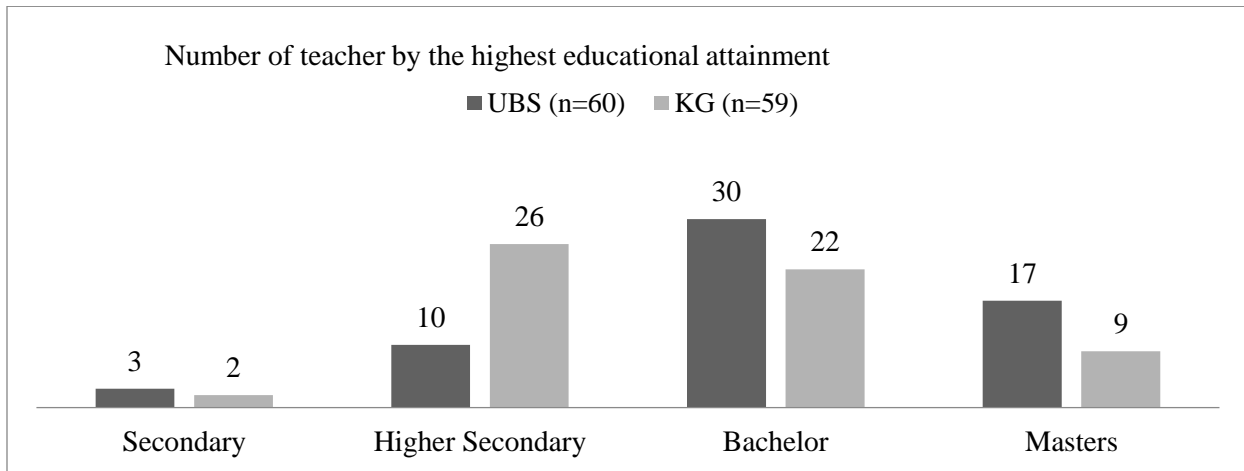
		Shishu Niketan (n=60)	Kindergarten (n=59)
Mean age (in years)	Head teacher	28.6	43.5
	Assistant teacher	26.7	29.0
Number of female teachers	Head teacher	15	7
	Assistant teacher	45	39
Mean years of teaching experience	Head teacher	3.7	17.3
	All teacher	3.2	6.5

### *Educational attainment and training experience of teachers*

Although BRAC Education Programme (BEP) has planned to recruit teachers with at least a Bachelor degree, it was not always possible to do so. The *Shishu Niketan* school teachers had an education ranging from completion of secondary education to Master degree. It was from grade IX to Master degree for the kindergarten teachers. Among the *Shishu Niketan* school teachers 5% completed secondary education, 16.7% completed higher secondary education, 50% had a

Bachelor degree, and 28.3% had a Master degree. Of the kindergarten teachers, 3.4% had secondary, or below education, 44% completed higher secondary education, 37.3% had a Bachelor degree, and 15.3% had a Master degree. The above figures clearly show that the teachers of *Shishu Niketan* s were much ahead of their counterparts in the kindergartens in terms of educational qualifications. Whereas two teachers of the kindergartens were educated from the madrasas; no such teachers were observed in the *Shishu Niketan* School.

Figure 1 Number of teachers by their educational attainment and school type



BRAC has a provision for basic training for 11-days for all its teachers which is not the case for the kindergartens. Most of the teachers of the *Shishu Niketan* schools (98.3%) received basic training on joining their present school; this was 6.8% among the teachers of the kindergartens. A quarter of the *Shishu Niketan* school teachers also received training from other sources before joining to their present schools; this was 13.6% among the teachers of the kindergartens. Overall, all the teachers of *Shishu Niketan* schools and 18.6% of those of the kindergartens had training.

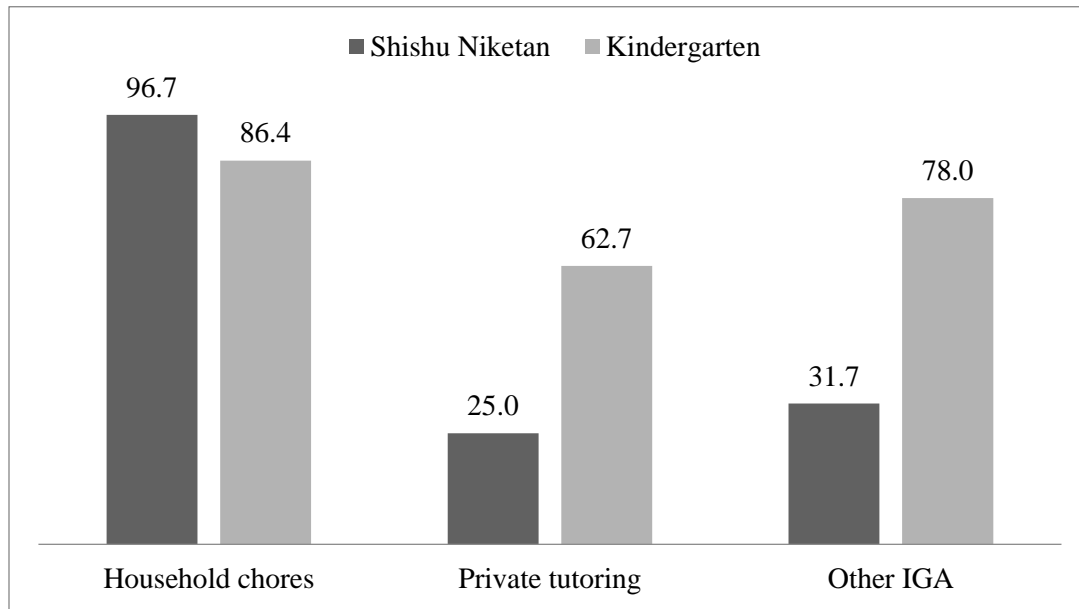
Monthly refreshers training of teachers is an essential part of education programmes in BRAC. During the first five months of 2017, 21.7% of the teachers of *Shishu Niketan* schools received no refreshers training, 8.3% received one, 36.7% received two, and 33.3% received three. No such provision was there for the teachers of kindergartens.

#### *Teacher's involvement with other activities*

Apart from teaching, involvement with household chores and other income generating activities (IGA) was observed among the teachers of both types of school. For instance, 96.7% of *Shishu Niketan* and 86.7% of kindergarten school teachers were involved in household chores. A quarter of the teachers of *Shishu Niketan* schools and 62.7% of those of kindergartens were engaged in private tutoring for additional income. Involvement of teachers in any other income generating activities (IGA) was as high as 78% in the case of kindergartens. This rate was 31.7% among the

teachers of *Shishu Niketan* schools. Those who were engaged in private tutoring were also engaged in other IGA.

*Figure 2* Percentage of teachers involved in household chores, private tutoring and other income generating activities (IGA) and school type



**CHAPTER 4**  
**STUDENTS' HOUSEHOLD PROFILE**

In this section, socioeconomic characteristics of the households of the students are presented in juxtaposition with different social, economic and educational factors. Comparison between *Shishu Niketan* and kindergarten students was common in each of the analysis.

**4.1 Socioeconomic characteristics of households**

Over 93% of the students of each type of school came from Muslim households, around three-quarters of the households of each type were permanent residents, and 97% of them had electricity at home (Table 9). No statistically significant difference was observed by school type in any of these three indicators. Television was available at home of 72.4% of the students of *Shishu Niketan* schools and 85.3% of those of kindergartens ( $p < 0.001$ ). Although no difference was observed by school type regarding having a cellular phone to any of the household members, but mothers of kindergartens were ahead of those in *Shishu Niketan* schools in this regard (81% versus 65.9%;  $p < 0.001$ ).

Table 9. Percentage of students by various socioeconomic indicators and school type

Indicator	Category	School type		Level of Significance
		Shishu Niketan	Kindergarten	
Religion	Muslim	94.6	93.3	ns
Residential status	Permanent	74.9	77.3	ns
Electricity	Available	96.9	97.7	ns
Television in HH	Available	72.4	85.3	$p < 0.001$
Cellular phone in HH	Available	100.0	92.2	ns
Mother's cell phone	Available	65.9	81.0	$p < 0.001$
Labour sell status	Sell labour	23.8	11.7	$p < 0.001$
Land ownership by HH	< 10 decimal	58.7	46.1	$p < 0.001$
	$\geq 10$ decimal	41.3	53.9	ns
NGO member in HH	Yes	58.1	47.9	$p < 0.01$
Level of income of HH	$\leq 10000$	22.0	21.1	-
	> 10000 - 15000	29.4	25.5	-
	> 15000 - 25000	31.6	31.0	-
	> 25000	17.0	22.5	-
Food security status	Deficit	17.9	12.6	$p < 0.05$
	Breakeven	30.7	28.7	-
	Surplus	51.3	58.7	-

Apart from the Muslims, the students belonging to other religion were the Hindus. No Buddhists or Christian students were observed in any of the schools under study. No students other than Muslims was observed in five *Shishu Niketan* schools and four kindergartens. One *Shishu Niketan* had 23.3% Hindu students, another had 13.3%, and the other had 10%. This proportion

was below 10% in rest seven *Shishu Niketan* schools. The proportion of Hindu student was 26.7% in one kindergarten, 13.3% in two and less than 10% in eight.

Proportionately more households of *Shishu Niketan* students than those of kindergartens were dependent on selling manual labour (23.8% versus 11.7%;  $p<0.001$ ) and they were also more likely to have less land in their possessions – 58.7% of *Shishu Niketan* and 46.1% of kindergarten students’ households had less than 10 decimals of land ( $p<0.001$ ). Whereas about 48% of the households of kindergarten students had at least one member having membership of NGO *samity*, it was 58.1% among the *Shishu Niketan* students’ households ( $p<0.001$ ). Although not much variation was observed between the students of two types of schools regarding household income but more households with deficit food security status was observed among the students of *Shishu Niketan* schools.

#### 4.2 Educational attainment of parents

Information on years of schooling completed by both the parents of the students of two types of schools was collected. A quarter of the fathers and 15.2% of the mothers of *Shishu Niketan* students had never been to school. These figures were 10.9% among the fathers and 6.4% among the mothers of the students of kindergartens (Table 10).

Table 10. Percentage distribution of students by school type and parental education

Level of education	Fathers education			Mothers education		
	Shishu Niketan	Kindergarten	Total	Shishu Niketan	Kindergarten	Total
Never schooling	25.5	10.9	18.3	15.2	6.4	10.9
Grade I – IV	14.0	7.9	11.0	13.5	6.2	9.9
Grade V – IX	38.4	38.3	38.4	52.5	54.1	53.2
Grade X+	22.1	42.9	32.3	18.8	33.3	26.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Fourteen percent of the fathers of *Shishu Niketan* students admitted in school but left school before completing primary education, 38.4% completed primary but did not complete secondary education and 22.1% completed secondary education. These figures were 7.9, 38.3 and 42.9%, respectively among the fathers of kindergarten students. Mothers of 13.5% of the students of *Shishu Niketan* schools did not complete primary education, 52.5% completed primary but not the secondary education and 18.8% completed secondary education. These figures were 6.2, 54.1 and 33.3% among the mothers of the students of kindergartens.

A summarised version of the above information along with parents’ literacy status is provided in Table 11. Educational qualifications of both the parents of the students of kindergartens were ahead of that of the parents of *Shishu Niketan* students. This can be seen in regard to completing primary or secondary education. On average, both the parents of about 10% of the students of

*Shishu Niketan* schools and about 4% of those of kindergartens had never been to school ( $p < 0.001$ ). These are the first generation learners. The literacy rate of the parents of the students of the kindergartens was significantly higher than that of the *Shishu Niketan* schools ( $p < 0.001$ ). On average, both the parents of over three-quarters of the students of kindergartens were literate. This figure was 56.3% for the students of *Shishu Niketan* schools.

Table 11. Comparison of two groups by school type and some educational indicators

Indicators (%)	School type		Level of significance
	Shishu Niketan	Kindergarten	
Literate father	63.5	81.4	$p < 0.001$
Literate mother	72.9	86.5	$p < 0.001$
Literate both	56.3	75.9	$p < 0.001$
Father completed primary	60.6	81.2	$p < 0.001$
Mother completed primary	71.3	87.4	$p < 0.001$
Father completed secondary	22.1	42.9	$p < 0.001$
Mother completed secondary	18.8	33.3	$p < 0.001$
First generation learner	9.7	3.9	$p < 0.01$

### 4.3 Age distribution of students

Age distribution of the students under study along with central tendency is provided in Table 12. On average, the pre-primary and grade I students of kindergartens were elder than their counterparts in the *Shishu Niketan* schools. However, no difference was observed among the second graders of both types of school.

Table 12. Percentage distribution of students by age, grade and school type

Age (in years)	Pre-primary		Grade I		Grade II	
	Shishu Niketan	Kindergarten	Shishu Niketan	Kindergarten	Shishu Niketan	Kindergarten
3	7.5	0.7	-	-	-	-
4	33.1	1.4	2.4	-	-	-
5	43.2	28.1	13.1	6.1	-	-
6	10.6	43.1	35.6	18.4	11.9	2.8
7	5.0	20.5	30.4	49.9	32.2	25.2
8	0.6	6.2	11.3	18.4	28.0	45.4
9+	-	-	7.2	6.2	27.9	26.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Mean	4.7	6.0	6.6	7.0	8.0	8.0
Median	4.7	6.0	6.5	7.0	7.7	8.0
Range	3-8	3-8	4-11	5-11	6-12	6-12



In principle, the pre-primary students should be of age five years, the first graders should be of age six years and the second graders should be of age seven years. This was not the case in practice. The mean age of the students of *Shishu Niketan* was 4.7 years for pre-primary, 6.6 years for grade I and eight years for grade II. These figures were six, seven and eight years, respectively for the students of kindergartens. On average, the kindergarten students of various grades were consistently one year elder than appropriate age corresponding to their grades. The pre-primary students of *Shishu Niketan* schools were 0.3 years younger, and the first graders were 0.6 years elder than appropriate age for the particular grades.

Table 13 further shows that 43.2% of the pre-primary students of *Shishu Niketans* and 35.6% of the first and 32.2% of the second graders of the similar institutions had a perfect match between age and grade of study. This was 28.1, 18.4 and 25.2%, respectively for the students of kindergartens. The figures for the *Shishu Niketans* were although higher than the corresponding figures for the kindergartens, the proportion gradually decreased with the increase of grade.

Table 13. Percentage distribution of students by categories in terms of age-grade difference, grade and gender

Categories by age-grade difference	Pre-primary		Grade I		Grade II	
	Boys	Girls	Boys	Girls	Boys	Girls
<b>Shishu Niketan</b>						
Under-aged	44.2	36.5	14.4	16.7	10.3	13.3
Perfect age	40.7	45.9	33.3	38.5	31.0	33.3
Over-aged	15.1	17.6	52.3	44.8	58.7	53.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
<b>Kindergarten</b>						
Under-aged	3.9	0.0	4.8	7.9	1.4	4.1
Perfect age	19.5	37.7	15.5	22.2	25.7	24.7
Over-aged	76.5	62.3	79.7	69.9	72.9	71.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: Pre-primary: under-aged (<5 years), perfect age (5 years), over-aged (6 years+)

Grade I: under-aged (<6 years), perfect age (6 years), over-aged (7 years+)

Grade II: under-aged (<7 years), perfect age (7 years), over-aged (8 years+)

The proportion of under-aged students decreased with the increase of grade in the *Shishu Niketan* schools but the proportion of over-aged students increased with the increase of grade (Table 13). For instance, 40.6% of pre-primary, 15.5% of grade I and 11.9% of grade II students of *Shishu Niketan* s were under-aged. The proportion of over-aged students in these institutions was 16.2, 48.9 and 55.9%, respectively. No such trend was observed in the kindergartens. A very small proportion of under-aged children was observed in the kindergartens – 2.1% in pre-primary, 6.1% in grade I and 2.8% in grade II. But the proportion of over-aged students in these institutions was much higher than that in the *Shishu Niketans*. Approximately 70% of pre-

primary, over three-quarters of grade I and 72% of grade II students of kindergartens were over-aged.

Proportionately more girls than boys were observed in *Shishu Niketan* s who had perfect match between age and grade. The same was observed in pre-primary and grade I of the kindergartens. A very small difference was observed between the boys and the girls of grade II who had the above characteristics. More under-aged boys than girls were observed in pre-primary of *Shishu Niketan* schools but an opposite scenario was observed in other two grades. In terms of over-aging, girls were ahead of boys in pre-primary but an opposite scenario was observed in grades I and II. Proportionately more over-aged boys than girls were also found in pre-primary and grade one of the kindergartens.

#### 4.4 Previous educational experience of students

Information on students' participation in pre-primary education was collected. The students who were currently enrolled in pre-primary education were not supposed to have previous experience of the same education. However, it was observed that 2.5% of the pre-primary students of *Shishu Niketans* and 24% of those of kindergartens had gone through pre-primary education before admitting into their present educational institutions ( $p < 0.001$ ). Whereas two-thirds of the *Shishu Niketan* students of grade I and II had experience of pre-primary education, it was 98.6% among the first graders and 90.9% among the second graders of kindergartens (Table 14).

Table 14. Percentage of students having pre-primary education by school type and grade

Grade	School type		Level of significance
	Shishu Niketan	Kindergarten	
Pre-primary	2.5	24.0	$p < 0.001$
Grade I	66.1	98.6	$p < 0.001$
Grade II	66.9	90.9	$p < 0.001$

Proportionately more boys than girls of the first graders of *Shishu Niketan* schools had pre-primary education (70% versus 61.5%). But among the second graders, the girls were ahead of the boys in receiving pre-primary education (70% versus 63.8%). A similar relationship was observed among the second graders of the kindergartens (girls 93.2%, boys 88.6%). Among the pre-primary students of kindergartens, 26% of boys and 21.7% of girls had previous experience of pre-primary education.

Majority of the kindergarten students received their pre-primary education from the same institutions or other kindergartens. On the other hand, *Shishu Niketan* students received it from NGO operated non-formal schools, government primary schools or kindergartens.

Nearly a fifth of the first graders and 73.7% of the second graders of *Shishu Niketan* schools had previous experience in studying at primary level (Table 15). Studying at grade I in other school by the second graders is obvious because they directly admitted in grade II in *Shishu Niketan*.

However, it is surprising to note that over a quarter of the second graders had no such experience. A question may come whether these students directly admitted in grade II in *Shishu Niketan* schools without going for pre-primary or grade I education. A similar question may raise about those who admitted in grade I of *Shishu Niketan* schools after having a similar level of education in other schools.

Table 15. Percentage of students previously admitted in primary level

Grade	School type		Level of significance
	Shishu Niketan	Kindergarten	
Pre-primary	1.9	0.7	ns
Grade I	19.0	4.1	p<0.001
Grade II	73.7	11.2	p<0.001

A further exploration was made with those students who admitted in grade II of *Shishu Niketan* schools without getting education equivalent to grade I. Twenty-eight percent of these students were at the right age of grade II (eight years), 38.7% was under-aged (9.7% six-years, 29% seven years) and 32.3% was over-aged (16.1% nine years, 6.5% ten years and 9.7% eleven years). This means that the *Shishu Niketan* authority did not admit all of them due to over-ageing. There was a scope to admit a good portion of them in lower grades.

Among the second graders of *Shishu Niketan* schools, 51.7% received both pre-primary and first grade of primary, 22% did not receive pre-primary education but received first grade of primary education, 15.3% received pre-primary education but did not receive primary education, and 11% received none.

#### 4.5 Reasons behind choosing present school

After being asked about the reason for choosing the particular school for their children, the parents of both types of school responded similarly. Majority of the parents mentioned that it was the quality of education for which they sent their children to this particular school. They were over 90% in both types of school (Table 16). The second important reason as the parents mentioned was regular holding of classes which was also related to the quality of education. This reason was noticed by 53.6% of the parents of *Shishu Niketan* students and 56.7% of the parents of kindergarten students. Two other important reasons as mentioned by the parents were: school was nearer to home and communication to school was good.

Table 16. Reason for getting admission in current school by school type

Reason of getting admission	School type	
	Shishu Niketan	Kindergarten
Quality of teaching is better	91.0	92.4
Classes hold regularly	53.6	56.7
Having co-curricular activities	8.7	3.0
School is nearer to home	34.5	35.6
Communication to school is good	15.7	21.6
Advise by Teacher/PO	9.9	2.5
Advise by relative/ neighbour	7.2	4.4
Other reason	6.7	8.7

Note: Multiple responses counted

#### 4.6 Tutoring support for the students

A much higher proportion of kindergarten students availed private tutoring compared to their counterparts in *Shishu Niketan* schools (Table 17). Over two-thirds of the students of kindergartens and 13.5% of those of *Shishu Niketan* schools availed private tutoring to supplement their school education ( $p < 0.001$ ). The proportion of students availing private tutoring significantly increased with the increase of grade in both types of schools. Less than 10% of pre-primary, 12.5% of grade I and 20.3% of grade II students of *Shishu Niketan* schools were availing private tutoring ( $p < 0.05$ ). This rate was 59.6, 63.9 and 75.5%, respectively among the students of kindergartens ( $p < 0.01$ ). Statistically significant difference was noticed in each of the three grades.

Table 17. Percentage of students availing private tutoring by school type and grade

School type	School type			Level of significance	Total
	Pre-primary	Grade I	Grade II		
<i>Shishu Niketan</i>	9.4	12.5	20.3	$p < 0.05$	13.3
Kindergarten	59.6	63.9	75.5	$p < 0.01$	66.3
Level of significance	$p < 0.001$	$p < 0.001$	$p < 0.001$		$p < 0.001$

Family members were in general supportive in helping the students in study at home. Over 82% of the students of *Shishu Niketan*, and 85.1% of those in kindergartens received such support (Table 18). No significant different was observed in this at aggregate level or grade-wise. The rate of students availing household members support decreased in both types of schools with the increase of grade; however a statistically significant increase was observed only in kindergartens ( $p < 0.05$ ).

Table 18. Percentage of students receiving support from household members in education at home by school type and grade

School type	School type			Level of significance	Total
	Pre-primary	Grade I	Grade II		
Shishu Niketan	86.9	82.1	76.3	ns	82.3
Kindergarten	91.8	82.3	81.1	p<0.05	85.1
Level of significance	ns	ns	ns		ns

Own school teachers, independent private tutors, relatives and neighbours, and higher grade students were the popular private tutors. Whereas the own school teachers were the most popular private tutors among the kindergarten students, it was independent private tutors among the *Shishu Niketan* students (Table 19). Whereas, 15% of the *Shishu Niketan* private tutees were tutored by their own school teachers which were the case for 46.7% of the private tutees of kindergartens. The mothers were the most popular household members who provided study support at home followed by the siblings. This was the case among the students of both types of school.

Table 19. Percentage distribution of students receiving private tutoring by providers and school type

Private tutoring providers	School type	
	Shishu Niketan	Kindergarten
Own school teacher	15.0	46.7
Other school teacher	8.3	6.2
Coaching centre	0.0	6.9
Independent private tutor	43.3	12.1
Relative/neighbour	18.3	11.1
Student of higher grade	15.0	17.0
Total	100.0	100.0

Getting help from both the sources (private tutor and household member) was also analysed. Among the students of *Shishu Niketan* schools, 7.5% of pre-primary, 10.1% of grade I and 11.9% of grade II received such support. This was 52, 55 and 57.3%, respectively for the students of kindergartens. Nearly 15% of the students of *Shishu Niketan* schools and less than 10% of those of kindergartens had none of these supports.

#### 4.7 Expenditure for education

Out of pocket expenditure for education by the households during January-May 2017 was collected. Per student cost for this duration ranged from BDT 3,000-3,500 for *Shishu Niketan* schools and BDT 5,500-7000 for kindergartens. Table 20 shows, on average, private expenditure for the students of kindergartens was more than double of that of the *Shishu Niketan* students

(BDT 6,510 versus BDT 3,164;  $p < 0.001$ ). Grade-wise variation was also observed. The average expenditure per student increased with the increase of grade. For instance, it was BDT 3,000 for the pre-primary students of *Shishu Niketan* schools, BDT 3,117 for the students of grade I and BDT 3,453 for the students of grade II of the similar institutions. This was BDT 5,852, 6,564 and 7,125, respectively for the students of kindergartens. School type-wise statistically significant difference was observed in the expenditure of the students of each grade ( $p < 0.001$ ).

Table 20. Mean expenditure for education of students by school type and grade, January-May 2017

School type	School type			Level of significance	Total
	Pre-primary	Grade I	Grade II		
Shishu Niketan	3,000	3,117	3,453	$p < 0.05$	3,164
Kindergarten	5,852	6,564	7,125	$p < 0.001$	6,510
Level of significance	$p < 0.001$	$p < 0.001$	$p < 0.001$		$p < 0.001$

School type-wise analysis shows that there were particular heads of expenditure for which the students of *Shishu Niketan* didn't have to spend any money and these are: admission fees, books, examination fees and commuting to private tutor (Table 21). Therefore, the total expenditure was significantly higher for the students of kindergartens than those of the *Shishu Niketan* schools. Grade-wise analysis of the expenditure for education demonstrates the highest expenditure for grade II (Table 22). The expenditure gradually increased from pre-primary to grade II.

Table 21. Mean of expenditure for education by heads of expenditure and school type

Head of expenditure	School type		Level of significance
	Shishu Niketan	Kindergarten	
Admission fees	0	500	na
Monthly tuition fees	1,242	1,180	ns
Textbooks	0	563	na
Guidebooks	3	25	$p < 0.001$
Materials	316	537	$p < 0.001$
School dress	456	600	$p < 0.001$
School bag	235	320	$p < 0.001$
Picnic, sports fees	2	27	$p < 0.001$
Examination fees	0	188	na
Private tutoring	111	1,161	$p < 0.001$
Communication to school	108	290	$p < 0.001$
Communication to private tutor	0	22	na
Tiffin	672	966	$p < 0.001$
Others	19	108	$p < 0.001$

Note: na = not applicable, ns = not significant at  $p = 0.05$

Table 22. Mean of expenditure for education by heads of expenditure, school type and grade, January-May 2017

Educational expenses	Pre-primary		Grade I		Grade II	
	Shishu Niketan	Kinder-garten	Shishu Niketan	Kinder-garten	Shishu Niketan	Kinder-garten
Admission	0	472	0	539	0	489
Monthly fee	1,142	1,029	1,298	1,190	1,297	1,323
Text book	0	551	0	526	0	615
Guide book	0	6	6	14	3	57
Various materials	256	448	336	546	367	618
School dress	445	545	465	592	459	664
School bag	231	302	224	346	255	314
Various donation	0	53	1	40	5	48
Examination fee	0	173	0	183	0	210
Private tutor fee	75	931	76	1,194	212	1,363
Conveyance for school	158	280	73	295	92	296
Conveyance for private	0	0	0	0	0	69
Tiffin/snacks	680	943	616	1018	742	937
Others	13	121	24	82	21	121

## FROM TRAINING TO CLASSROOM: TEACHERS' PERSPECTIVES

To understand teacher's experience of basic training, we explored teacher's views on various aspects of training and how they were integrating their learning in classroom activities. Duration of training was 11 days and BRAC Institute of Educational Development (BIED) conducted it. The training held in two sessions. We interviewed 12 teachers (four of them were heads) who have received this training. The aim was to get a greater insight into their training experience as well as the challenges they were facing during school activities. An interview guide with a set of open ended questions was used while interviewing them (Annex). We asked our teachers to express from their own experiences, not something they heard from others.

### 5.1. Training Duration and Content

The teachers received this training in February and March 2017. Most of them participated in training before they started teaching in *Shishu Niketan* schools but few of them received it afterwards. The content of training covered a range of topics: pedagogy, child development, subject-wise teaching-learning method, content for pre-primary teaching, preparation of cost effective teaching materials etc. There were also few lessons on management and leadership exclusively for the head teachers. BIED made a schedule of 11 days and delivered all those content within that timeline. In interviews, we asked several questions pertaining to their training experience, training activities, the difficulties they faced during and after training, and learning they were using most etc.

### 5.2. Learning from Training

While describing the topics the teachers learned from the training mentioned the following for several times: dealing with children with special needs, creating a learning environment in the classroom, preparation of lesson plan and use of multimedia. However, when they were asked to explain how they can create a better learning environment in the classroom, they could not explain properly. The teachers mentioned several new issues that they have learned during training. Some of the teachers also mentioned their learning from the perspective of different subjects and topics they can apply in classroom most. As one of the head teachers, who was a teacher in BRAC formal school before joining in *Shishu Niketan*, identified her new learning in the following way.

I did not have any knowledge about management before this training. I got to know detail about school schedule, file keeping etc. Additionally, I also learned about how to deal with all the assistant teachers and parents. I received basic training while I was a teacher in BRAC formal school but these are something new for me that I have learned from this training (T1).



Another teacher identified content specific learning from the training. Among the interviewed teachers, four found the discussion on English teaching really effective for them. As one of them mentioned ‘English part of the training was totally in English and we were also needed to speak in English with each other. I really liked this part and it helps me a lot now, I understand (T2).’

Another teacher, who also received basic training before, mentioned that there was a difference between this and the previous one. She identified that ‘In the earlier basic training there were lessons from Bangla, English and Mathematics but in this training we also learned about Primary Science, Bangladesh and Global Studies and Religious Studies. Out of eight interviewed teachers, six mentioned that the lessons on steps of problem solving in Mathematics were really helpful for them which they were using in classrooms.

One head teacher said that before attending the present training she thought that there would be little difference between this and the previous training that she received from BRAC. However, as the training sessions moved she found differences in a number of areas. She is now comfortable in applying various methods she learnt from this training. All the four interviewed head teachers mentioned that because of sessions on management and leadership, they could learn many new topics. For this reason they now know how to manage all the files and documents, how to organize the fees collection and also the maintenance of schedule in school.

### **5.3. Delivery Method of Training**

While talking on various aspects of the training one teacher highly appreciated the lesson delivery method. Explaining the fact that the facilitator of the training was really patient and accessible; she commented that ‘it was an effective one’. The teacher further stated, ‘When the trainees identified any issues which they could not understand well, the trainers explained those for several times, if needed. Also, the steps of Mathematics were new for me that I did not have in basic training (T5).’ A good number of the interviewed teachers talked on delivery of training contents digitally. One of them (T9) explained that

I found the digital content part the most challenging. We learned how to connect the laptop, projector and search the content but we did not have any discussion on how can digital contents be embed in our lesson plan. We already knew about the way of writing lesson plan but that was similar to our previous training, there was nothing new. I think if we could have learnt how to embed digital content in our lesson plan would be more effective.

The following statement of another teacher replicates the above idea,

We have learned how to start and shut down laptop and also how to connect the projector. We also practiced these by ourselves during training session. The trainees also showed us how we can find different pages of different books in digital content (T7).

Referring the challenges of using multimedia in classroom, one teacher made the following statement.

There was no digital content for nursery class that we found to some extent challenging. Additionally it takes almost 15-20 minutes to connect the projector in classroom. For this reason, teacher needs to come to classroom earlier. (T13)

#### **5.4. Implication of Learning from Training**

Several teachers identified the effectiveness of training from the context of the application in classroom activities. To express her satisfaction, one teacher told that the training helped her to get rid of nervousness and there was hardly anything that she did not like. Another teacher found the steps of problem-solving in Mathematics really effective for her classroom as she said, ‘My students seem really happy when I solve Mathematical problems step by step during teaching in the classrooms. They also found it easy to understand and therefore they enjoy my class’ (T8). Similarly another teacher stated that the discussion on creative questioning, storytelling, extracurricular activities, steps of mathematics problem solving etc. were most effective learning for her as she can use these in her classroom regularly. In line with this, one teacher highlighted the students’ reaction to her teaching as she said,

The learning from Bangla subject training was more helpful for me specially the steps of storytelling. I also found that my students really enjoy the lessons of math with games. I learned all these from training and therefore I feel comfortable while conducting classes. (T11)

Likewise, another teacher identified how the learning from training helped her in conducting English classes and she pointed out

During training, we had to speak in English and that seemed really difficult for me. However, now while teaching English, I am trying to use small sentences with my students and this is really effective in classroom as students also understand my instructions. So the training on speaking English helped me to teach in classroom especially for grade I. (T14)

On a different note, four teachers have mentioned that application of multimedia helped them to deal with Mathematics and English lessons more effectively. One of them mentioned

The most useful learning from the training was the application of teaching materials for Mathematics lessons. I think the application of multimedia for Mathematics and English have made the teaching-learning easy and comfortable. (T8)

Likewise, another teacher said that the digital content was helping them a lot in teaching Bangla alphabets and words and the correct pronunciation of those. In case of English pronunciation,

teachers were facing many problems. But now by using multimedia, they know the correct pronunciation and if there is any mistake, they can correct that immediately. Another teacher told that because of applying multimedia in the classroom, the students become interested in participating in the classroom activities.

One assistant teacher stated that she was using almost all topics that were discussed in training. She said, 'I cannot remember any topic from training that I cannot use in classroom. The most applied techniques are: teaching mathematics calculation by using real materials and also English conversation.' (T11). The teachers now can check the correct pronunciation of words easily by the grace of multimedia and digital content.

One teacher described how digital content helped her in correctly pronunciation of alphabets and words in classrooms and she stated that because of her colloquial accent sometimes she cannot pronounce the alphabets and words correctly. In this case the digital content was very helpful to her.

### **5.5. Difficulties in Training**

The teachers also mentioned several difficulties they were facing during and after training. One head teacher shared the need of a longer session for the management and leadership part of the training. She shared following experience of conflict management:

In my school, my teacher in nursery section leaves school after three hours class but other teachers of grade I and II have to leave after four hours. So they are little dissatisfied. I cannot understand how I can solve this. So it would be more effective for us, if we get to know more about this type of issues in training. (T6)

Another teacher identified the time constraints of the teacher. According to her, 'There was nothing difficult in that training but I think it would be more effective if we get more time. For instance, more time had to be allocated for Bangla' (T10). Among the 16 teachers, nine mentioned the time issue. Similarly, one teacher (T12) mentioned that they should have more time for Bangla and the Mathematics problem solving of grade II session. Another teacher mentioned similar issues for Bangladesh and Global Studies.

Summarising the discussion of this chapter, it can be inferred that the teachers of *Shishu Niketan* schools showed satisfactory perception about the training they received. They also demonstrated their enthusiasm to apply the knowledge and skills they gained from the training. They identified the significance of participation in training and how this experience shaped their activities in classrooms. Keeping this positive impression active, the management of *Shishu Niketan* schools should consider the suggestions that the teachers made during the interview. The most important message can be taken from their opinion about the execution of multimedia classroom. The challenges the teachers faced while conducting those classes were well identified in this section. They were facing difficulties to blend the technologies with their teaching-learning plan.

Therefore, further follow up training should address this issue providing simulation teaching session.

## CHAPTER 6

### DISCUSSION AND RECOMMENDATIONS

This chapter discusses the findings of this study as presented in the previous chapters. Major characteristics of two types of schools have been identified and summarised. Finally, some recommendations are made.

#### **6.1 Discussion**

##### *Schools*

The year 2017 was the initiation phase of this project; therefore, many preparatory activities had to be carried out and therefore, late was noticed in opening all schools and grades on time. The activities related to school opening included school-house selection, the building of school room, teacher recruitment, and searching of students for three grades. All these activities occupied a major part of the first five months of this project. On the other hand, the kindergartens did not face such situation as most of them were operating in those areas before the *Shishu Niketan* schools were started. This distinguishes the status of these two types of school in the sample.

The plan was to launch three grades in each *Shishu Niketan* – pre-primary and the first two grades of primary, with 32 students in each grade. School-wise variation was observed in both the number of grade and students. Some of the schools opened more than one section of either pre-primary or grade I because grade II could not be opened there. In grade II, the number of students was comparatively lower than the other grades. Out of 15 *Shishu Niketan* schools, two were not fully established during data collection in late May 2017. However, the authority confirmed that all the infrastructure related activities would be completed within June 2017.

Each of the *Shishu Niketan* schools followed a fixed structure of three classrooms and one office room. Otherwise, the kindergartens had no homogeneous structure. Because the *Shishu Niketans* were operated by a single institution BRAC but the kindergartens had no such a common platform. The *Shishu Niketan* schools were cleaner than the kindergartens and all the *Shishu Niketan* schools had water and sanitation facilities. Monthly tuition fees were higher for the kindergartens than the *Shishu Niketan* schools. The *Shishu Niketan* schools had enough materials for curricular and co-curricular activities as opposed to lack of such materials in the kindergartens. Availability of such materials is not enough unless the teachers and the students use them for teaching-learning purpose.

The student-teacher ratio was higher in the kindergartens than the *Shishu Niketan* s but the contact hour was longer in the *Shishu Niketans* than that in the kindergartens. These created an opportunity for the *Shishu Niketan* students to get more attention from their teachers. This can provide a platform for both the students and teachers to create an effective teaching-learning environment within the school.

To ensure effective management of the school activities, the provision of parents committee and school management committee was also observed in *Shishu Niketan* schools. Most of the schools formed such committees and organised several meetings already. These committees have the prospect to play an important role to work for the betterment of these schools. Therefore, *Shishu Niketan* staff of BEP should organise these meetings regularly with planned agenda.

Arrangement of the multimedia classroom was there in all the *Shishu Niketan* schools and they already started conducting classes using multimedia. The teachers seemed very enthusiastic and concerned about the implementation of technology-based education in their classrooms. Interviews with the teachers gave a hint that the teachers were giving more focus on the arrangement of these materials in classrooms. At this preliminary stage, this concern can be considered useful; however, the teachers should shift their concern to blend these technologies with the daily teaching-learning practice. They have learned how to connect the projector and laptop form basic and follow up training. They have also learned how to search the content in the laptop. Now it is important for them to have more concrete idea of teaching strategy integrating multimedia in the classroom. No such provision was observed in any of the kindergartens under study.

### ***Teachers***

Majority of the teachers recruited for *Shishu Niketan* schools had a Bachelor's degree. A few teachers were with secondary and higher secondary level education. All the heads of these schools had at least a Master's degree. The kindergarten schoolteachers were less qualified than those in *Shishu Niketan* schools. However, in terms of teaching experience, the kindergarten teachers were more experienced than those in the *Shishu Niketan* schools. On the other hand, the teachers of *Shishu Niketan* s were more exposed to training than their counterparts. All the teachers of *Shishu Niketan* schools were female but half of the heads and a good portion of assistant teachers of kindergartens were of that category. The heads of kindergartens were elder than those in *Shishu Niketan* schools.

Teacher's involvement with activities other than teaching was observed. Female teachers were mostly involved in household chores and male teachers with IGA. As there were male teachers in the kindergartens, the percentage of teachers involved with IGA was higher in kindergartens than in *Shishu Niketan* schools. Some teachers (more in kindergartens) were doing private tutoring on their students after official contact hours. The monthly salary of *Shishu Niketan* teachers was comparatively higher than that of kindergarten teachers. This might influence the satisfaction level of the *Shishu Niketan* teachers and will discourage them to migrate from this school to other schools in that area.

### ***Students***

Almost three-quarters of the students of *Shishu Niketan schools* were permanent residents of the particular areas. This increased possibility of continuing education in those schools. Various

indicators were considered to understand the household situation of the students. The kindergarten students were ahead of their counterparts in the *Shishu Niketan* regarding availability of television at home and mothers 'having cellular phones. However, no difference was observed in regard to having at least one cellular phone to at least one member of the households.

Households of the *Shishu Niketan* students were found lagging behind those of the kindergartens in some of the indicators reflecting socio-economic status of the households. The indicators include at least one member of the household selling labour for at least 100 days over a year, land ownership, and presence of NGO *samity* member in household. These traits of students' households can attribute the fact that the social capital of students of *Shishu Niketan* schools was comparatively lower than that of the kindergarten students. Although not much variation was observed in monthly income of the households of two groups of students, proportionately more students of *Shishu Niketan* schools came from deficit food security households. The other issue is the educational qualification of the parents. The kindergarten students were much ahead of those in the *Shishu Niketan* schools in this regard too. This was seen in terms of never schooled parents as well as parents completing secondary education. This also reveals the fact that *Shishu Niketan* schools could target the students with comparatively lower socio-economic background compared to the kindergartens.

The *Shishu Niketan* schools had a tendency to admit more under-aged children in its pre-primary education but more over-aged children in rest two grades. Over-aged students were more in grade II than in grade I. On the other hand; kindergartens admitted a very high proportion of over-aged children irrespective of grade. A perfect match between age and grade was also more in the *Shishu Niketan* schools than in kindergartens. Such a variation between *Shishu Niketan* schools and kindergartens might have influence in the students learning performance at every grade as well as at the end of primary education. Admission of students in grades appropriate to their age should be considered as a principle in school education.

While reporting the reasons for choosing *Shishu Niketan* schools for their children, the majority of the parents identified 'quality of education'. Therefore, it is important to sustain the quality of *Shishu Niketan* schools throughout the implementation years. BEP should take all necessary steps for this. Presence of multimedia in classroom attracted the parents to choose these schools for their children and it will attract more parents in future. Therefore, it is important to develop the teaching competencies of the teachers through using multimedia and digital content. Furthermore, comparative analysis of the private cost of education gives an idea that the students of *Shishu Niketan* schools needed to spend significantly less on their education as opposed to that of their peers in kindergartens. This reveals the fact that BRAC has introduced a low cost alternative of education in the respective areas through introducing *Shishu Niketan* schools. Therefore, it is important to supervise both the cost and quality in the upcoming years of implementation to sustain the goodwill.

## 6.2. Issues for Consideration

- Students should have the right to admit in age-appropriate grades. Careful screening of age of children and admission of them in age-appropriate grades are therefore the tasks for BEP in upcoming admission session.
- Proper monitoring of the classroom teaching-learning should be done regularly in order to facilitate and improve the use of multimedia and other activities. This is very much needed for honouring parental expectation from these schools.
- Follow up training of *Shishu Niketan* teachers should be based on the needs assessment, classroom observation and supervision reports to make the classroom teaching-learning provision more functional and efficient.
- There should be a provision to know from the students about the arrangements and care to them and to take care of their concerns.



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## Annex

### Annex 1

Table. The availability of different facilities, extracurricular and learning materials of *Shishu Niketan* School

School Code	Multimedia (Project or & Laptop)	Enough Light and Air circulation	Electricity	Electric Fan	CSN Friendly classroom	Demonstrative materials on Wall	Availability of Black Board	Playground	Library
A	√	√	√	√	√	√	0	√	0
B	√	√	√	√	√	√	√	0	√
C	√	√	√	√	0	√	√	√	√
D	√	√	√	√	0	0	√	√	0
E	0	√	√	√	0	0	√	√	0
F	√	√	√	√	0	√	0	√	0
G	√	√	√	√	0	0	√	√	√
H	√	√	√	√	0	0	√	√	0
I	√	√	√	√	0	√	0	√	0
J	√	√	√	0	0	√	0	√	0
K	√	√	√	√	√	√	√	√	√
L	0	√	√	√	√	√	0	√	0
M	√	√	√	√	√	√	√	√	0
N	√	√	√	√	0	√	√	0	0
O	√	√	√	√	0	√	√	√	√

School Code	Cleanliness of floor	Cleanliness of wall	Surrounding Environment (Calm & Quite)	Source of drinking water	Safe drinking water	Toilet facilities	Hygienic toilet
A	√	√	√	√	√	√	√
B	√	√	0	√	√	√	0
C	√	√	√	√	√	√	0
D	√	√	√	√	√	√	√
E	0	√	√	√	√	√	√
F	√	√	√	√	√	√	√
G	√	√	0	√	√	√	√
H	0	√	√	√	√	0	√
I	√	√	0	0	√	0	√
J	√	√	0	√	√	√	√
K	√	√	√	√	√	√	√
L	√	√	√	√	√	√	√
M	√	√	√	√	√	√	√
N	√	√	√	√	√	√	0
O	√	√	√	√	√	√	√

School Code	Hand Soap	Separate toilet for teachers	School Dresses	National Flag	National Anthem	Parade	Drawing materials	Play materials	Singing /Dancing materials	Presence of SMC	Presence of Parents Committee
A	√	√	√	√	√	√	√	√	√	√	√
B	√	0	√	√	√	√	√	√	√	√	√
C	0	√	√	√	√	√	√	√	√	0	√
D	√	0	√	√	√	√	√	√	√	0	√
E	0	√	√	√	√	√	0	√	√	√	√
F	0	0	√	0	0	0	0	√	√	√	√
G	0	√	√	√	√	√	0	√	√	0	√
H	0	0	√	√	√	√	0	√	√	0	√
I	0	0	√	0	√	√	√	√	√	0	√
J	0	0	√	0	√	√	√	√	√	0	√
K	√	0	√	√	√	√	√	√	√	√	√
L	0	√	√	√	√	√	0	√	√	√	√
M	0	√	√	√	√	√	√	√	√	√	√
N	0	0	√	√	√	√	0	0	√	√	√
O	0	√	√	√	√	√	√	√	√	√	√

## Annex (2)

### Interview guideline for UBS Teacher's

- আপনি কবে এই ট্রেইনিং পেয়েছেন? (সময়কাল)
- আপনার ট্রেইনিং এর অভিজ্ঞতা কেমন ছিল? (একটু বিস্তারিত বলুন, উদাহরণ দিন)
- ট্রেইনিং এর কোন অংশটি সবচেয়ে বেশি ভাল/খারাপ লেগেছে? কেন?
- ট্রেইনিং এর কোন অংশটি কঠিন/ সহজ লেগেছে? কেন?
- ট্রেইনিং এ আর কি কি থাকলে ভালো হত বলে মনে করছেন?
- ট্রেইনিং এর কোন শিখনগুলো শ্রেণিতে সবচেয়ে বেশি কাজে লাগাতে পারছেন? (বিষয়ের নাম উল্লেখ করে উদাহরণ দিন)।
- ট্রেইনিং এর কোন শিখনগুলো শ্রেণিতে কম বা একেবারেই কাজে লাগাতে পারছেন না? (বিষয়ের নাম উল্লেখ করে উদাহরণ দিন)।
- ট্রেইনিং এ আর কি হলে ভালো হত বলে মনে করছেন?
- শ্রেণিতে প্রোজেক্টর / মাল্টিমিডিয়া ব্যবহার এর ক্ষেত্রে, ট্রেইনিং এর শিখন কাজে লাগাতে পারছেন কি? ট্রেইনিং এর শিখন এ ক্ষেত্রে কিভাবে সাহায্য করছে উদাহরণ দিয়ে বলুন?