

**Time distribution in different teaching-learning activities  
in BRAC schools**

**Mirja M Shahjamal**

Young Researcher

August 2002

---

**BRAC Research and Evaluation Division**

BRAC centre, 75 Mohakhali, Dhaka-1212, Bangladesh  
Phone: 9881265 (Ext. 2707), Fax: 8823542, E-mail: [research@brac.net](mailto:research@brac.net)

## **Abstract**

This study aimed to explore different teaching-learning activities in BRAC schools, distribution of time in different activities and its relationship with students learning achievement. The study was done in 30 fifth grade NFPE schools located in a rural area. Fieldwork for the study was done in September 2001. Sixteen teaching-learning activities were found that occurred in the classrooms. It was observed that over two thirds of the total class time was spend in doing more than one activity. Evaluation of the students was the most time-consuming activity in the schools, which took 28% of the total time. The other popular activities were students' individual activities, correction of home task by the teachers, investigation of previous knowledge, teacher's discussion about text contents, blackboard use by the teacher and textbook reading by the students. Less amount of time was spent in roll call, textbook reading by the teacher and assembly. Not much variation was observed in this regard when data were analysed by subject or period. In general, the teachers spent more time in teaching Mathematics and less time for Bangla. No significant relationship was found between time distribution and performance of the students.

## Contents

	<i>Page</i>
Abstract	i
Contents	ii
List of tables	iii
<b>Introduction</b>	<b>1</b>
<b>Study objectives</b>	<b>2</b>
<b>Research Methodology</b>	<b>2</b>
The study area	2
Sampling	3
Field work	3
Ethical consideration	5
<b>Major Findings</b>	<b>5</b>
Teachers choice of subjects in different periods	5
Time allocation for different subjects and periods	6
Characteristics of ten schools	7
Different teaching-learning activities in BRAC schools	8
Descriptions/definitions of the activities	9
Activity wise time distribution	10
Time distribution by subject	12
Time distribution by period	13
Relationship between time distribution and performance of the students	14
<b>Discussion and Conclusion</b>	<b>19</b>
Acknowledgements	22
References	22
Annexes	23

## List of tables

	<i>Page</i>	
Table 1	Distribution of subjects by period	5
Table 2	Mean and standard deviation of length of time by different subject	6
Table 3	Mean and standard deviation of length of time by different period	7
Table 4	Distribution of time in different subject due to different period	7
Table 5	Distribution of class time by teaching-learning activities	11
Table 6	Percentage distribution of class time in different teaching-learning activities by different subject	13
Table 7	Percentage distribution of class time in different teaching-learning activities by different period	14
Table 8	Correlation between percentage of used time in different teaching-learning activities and the performance of the students	15
Table 9	Time distribution in different activities and average performance of the students of each of the schools separately	17
Table 10	Five most time taking activities in the 'best' and the 'poorest' schools	19

## Introduction

Classroom-based teaching-learning activities are generated towards the students where teachers play a vital role (Chowdhury 1974). The teachers interact with the students in classrooms during class time through different teaching-learning activities which has direct effect on student's learning achievement (Chantavanich et al 1990). Thus, the contact hour and activities in classrooms are very important in education. Different activities that occur in a classroom may be of different types. Presentation of subject matter, question-answer, group work, individual work, co-curricular activities are some of those. The classroom activities can be categorised in many ways. Vermunt and Verloop (1999) categorised it into three - cognitive, affective and meta-cognitive. Again, in view of regulation some activities are teacher-regulated, some are student-regulated and some are share-regulated between the teachers and students (Vermunt and Verloop 1999). All the teaching-learning activities are not equally important for a specific content and as such equal time is not required for each activity. Otherwise, selection of teaching-learning activity largely depends on the contents, the students and the teacher. Distribution of time may also vary depending on the above.

In Bangladesh there is no direction from the education authorities (government or non-governmental organisation) about time distribution in the classroom. However, for formal schools contact hour for each subject is prescribed in many policy documents including education commission reports (Government of Bangladesh 1974, 1988, 1997). The non-government organisations (NGOs) also do so in their schools in their own ways.

A very few attempts were made to identify classroom activities and use of time. Haq (1999) identified 13 teaching-learning activities in some schools under the IDEAL (Intensive District Approach to Education for All) project. Time distribution for each activity was also a part of that investigation. To identify the interactivity of classroom activities similar exercise was done by the same author and his colleague in a research under *Education Watch 2000* (Alam and Haq 2001).

BRAC, the largest NGO in Bangladesh, is operating nearly 35,000 non-formal primary (NFPE) schools throughout Bangladesh (BRAC 1999). A recent study on a few schools found that time in BRAC schools was mainly spent in investigating primary knowledge of the students, reading of today's lessons, work in small groups and writing of today's lessons. Correcting home tasks was an addition in the mathematics classes (Kalam et al., unpublished). No study was conducted to identify the distribution of class time and its relationship with the performance of the students in BRAC schools. The management of BRAC Education Programme (BEP) wants to know the distribution of class time in NFPE schools. Proper distribution of class time in different teaching and learning activities may be helpful for better performance of the students.

## **Objectives**

The study objectives are as follows:

- To explore different teaching-learning activities in BRAC schools;
- To identify the distribution of time in different teaching-learning activities in the class; and
- To find out the relationship between the distribution of class time and the performance of the students.

## **Methodology**

### **The study area**

The study was conducted on the fifth grade NFPE schools. A remote rural area, about 150 kilometers west of Dhaka city was chosen as study area. Agriculture is the main source of income of the populace of the study area. Various BRAC programmes viz., education, micro-credit, forestry, nutrition, health and population are in operation there. A total of 972 BRAC schools were in the region. The literacy rate in the area is very low. There were 13 team offices<sup>1</sup> under the region, two of which were selected purposively for the study. Number of fifth grade schools was 16 and 24 under the teams.

### **Sampling**

For the first objective, a primary list of teaching-learning activities was prepared with the help of the researchers of RED and the BEP specialists. Three NFPE schools were taken for fieldtest to finalise the list. Thirty NFPE schools of fifth grade were selected randomly from two different teams - 10 from one and 20 from the another. The schools were selected through systematic sampling independently from two teams. For the fulfillment of the third aim we concentrated only in the second team, ten schools were selected through systematic random system, from the previously selected 20 schools.

### **Fieldwork**

To find out the teaching-learning activities practised in BRAC schools, a checklist was prepared and pre-tested on three fifth grade BRAC NFPE schools. Observing the teaching-learning activities in these schools a list of activities was also finalised. Each of the activities was also defined with the help of the BRAC researchers, programme specialists and the school teachers (Annex 1). Another checklist was prepared on the basis of these activities, which was used to achieve the second aim of the study (Annex 2).

Ten Research Assistants were recruited for the fieldwork. All of them had Bachelor of Education with honours and Master in Education (M.Ed) degrees. The reason behind engaged such educated Research Assistants was that all of them had six-month's teaching experience in a primary or a secondary school as a partial fulfillment of their educational degree. So, they had practical experience about the teaching-learning activities occur in the classroom. The researchers together with the Research Assistants stayed in the study area for collecting the data. Before beginning the final observation, three days training was provided to the Research Assistants, one day in head office and two days in field. Initially, the researchers made the Research Assistants understand the checklist and how to use it in classroom situation. Then the challenge was to make similar understanding among the Research Assistants about their work. This was a tuff job. Five pair of

---

<sup>1</sup>BRAC schools are clustered in teams. Each team supervises 70-75 schools

Research Assistants observed five classrooms in the first day of field training. Each page of the checklist contains twenty boxes in a row for each activity and each box indicated as one minute. Four such pages were used for observing one period; this means there was a scope to observe the activities of 80 minutes for each period through a checklist. If an activity occurred for few seconds it was also recorded as an activity for a minute. Besides, if more than one activity was occurred in a single minute all the activities were recorded against this minute. After returning to the base, the congruencies and frictions between the observations of two Research Assistants were discussed intensively. If any friction appeared, the researchers and the Research Assistants discussed to reach nearer the truth. The discussion continued until all the Research Assistants and the researchers reached in a consensus. The Research Assistants were sent to the same schools in the second day of training to do the same. The extent of friction reduced extensively in the second day. The process of discussion continued every day of data collection. The Research Assistants reached the school before starting the classes. Each Research Assistant observed a school for full contact period. Thus, fieldwork for the first objective took three days. The teachers, students and the POs were not informed about the subject matter of observation. Sometimes the researchers and the Research Assistants had to say that they were observing the classroom culture. The Research Assistants used digital watches in classroom observation.

To find out the relationship between time distribution and the performance of the students 10 schools were observed, each for consecutively six days. Unlike the previous one, at this stage the teachers and the POs were informed about the aim of the research and the methodologies adopted. This was because a test was taken after completing the observation. The teachers together decided about the contents under each subject area that would be taught during the week of classroom observation. The researchers with the help of the Research Assistants developed a test instrument for four subjects Bangla, English, Mathematics and Social Studies (Annex 3). The test was administered after six days observation and the Research Assistants evaluated the answer sheets. Some criteria were set for evaluating the answer-sheets.



### **Ethical consideration**

A fundamental ethical principle of social research is, one must be informed before observed or giving any data. Moreover, anyone never be coerced to participate that is called '*informed consent*' (Newman 1991). For this study, some data were collected without informing the subjects and some were collected informing them. This was done because we thought that the second objective is yet to be achieved if we inform the matter to the subjects. However, it was a must for the third objective to let the subjects know about it. *Informed consent* is impossible in qualitative studies because events in the field and the researcher's actions cannot be anticipated (Miles and Huberman 1994).

## **Major Findings**

### **Teachers' choice of subjects in different periods**

There was no formal class routine in the NFPE school,s or the teachers did not strict themselves to anything like that. They teach subjects in their own way. Such a situation allowed us to see teachers' intention in choosing different subjects. A similar scenario was observed in terms of teachers' choice of subjects in different periods from both sets of observations viz., observation of 30 schools each for a day and observation of 10 schools each for six days (Table 1 and Annex 4). Table 1 shows that in about 60% of the cases English was taught in the first period and Mathematics during the second period. In 80% of the cases Bangla was taught in the fourth period. Social Studies was taught mostly in the second or the third period. Bangla was never taught in the second period and Mathematics was never taught in the fourth period.

**Table 1**  
*Distribution of subjects by period*

Subject	Period				Total
	First	Second	Third	Fourth	
Bangla	2 (6.7)	-	4 (13.3)	24 (80.0)	30
English	18 (60.0)	3 (10.0)	5 (16.7)	4 (13.3)	30
Mathematics	4 (13.3)	19 (63.3)	7 (23.3)	-	30
Social Studies	6 (20.0)	8 (26.7)	14 (46.7)	2 (6.7)	30
Total	30 (100.0)	30 (100.0)	30 (100.0)	30 (100.0)	120

Source: Observation of 30 schools, one day each.

### Time allocation for different subjects and periods

Table 2 shows the mean amount of time spent for each subject in a day. On average, length of a period was an hour, however there was variation in time allocation in different subjects and different periods. Highest time was used for Mathematics and lowest for Bangla (67.9 minutes and 55.5 minutes respectively). Average time spent for English was 61.6 minutes and for Social Studies 58.2 minutes. These findings have some sort of dissimilarities with those found through observing 10 schools. In the later case, more time was spent for teaching English (66.5 minutes), followed by Mathematics (64.4 minutes), Social Studies (61.9 minutes) and Bangla (53.1 minutes). It can be concluded that whatever the source is, Mathematics and English received more attention in terms of time allocation and Bangla got the least attention.

**Table 2**  
*Mean and standard deviation of length of time by different subject*

Subject	Observation of 30 schools each for a day		Observation of 10 schools each for six days	
	Used time (in minute)	Standard deviation	Used time (in minute)	Standard deviation
Bangla	55.5	11.0	53.1	10.5
English	61.6	11.8	66.5	12.6
Mathematics	67.9	11.4	64.4	10.3
Social Studies	58.2	10.5	61.9	11.1
Total	60.8	12.0	61.5	12.2
Significance	p<0.001		p<0.001	

Average time allocation for different periods shows that more time was allocated for the first two periods than the later two periods (Table 3).

**Table 3**  
*Mean and standard deviation of length of time by different periods*

Period	Observation of 30 schools each for a day		Observation of 10 schools each for six days	
	Used time (in minute)	Standard deviation	Used time (in minute)	Standard deviation
First	62.4	11.5	73.1	9.5
Second	67.8	10.6	64.0	9.8
Third	56.1	9.8	55.9	7.8
Fourth	57.1	12.6	52.9	10.4
Total	60.8	12.0	61.5	12.2
Significance	p<0.001		p<0.001	

Table 4 presents average time allocation by different subjects and periods. Findings from the observations of 30 schools show that Mathematics got the highest allocation of time irrespective of period in which it was taught. On the other hand, least amount of time was allocated for Bangla. However, observation of 10 schools shows a different scenario (Annex 5). A much higher amount of time was allocated for the first period if the subjects like English, Mathematics or Social Studies were taught. But if Bangla was taught even in the first period, less amount of time was allocated for it.

**Table 4**  
*Distribution of time in different subject due to different period*

Subject	Period			
	First	Second	Third	Fourth
Bangla	60.0	-	59.7	54.4
English	61.8	66.6	53.8	66.7
Mathematics	65.7	69.8	64.0	-
Social Studies	62.5	63.3	51.9	69.5

Source: Observation of 30 schools, one day each.

### **Characteristics of the 10 schools**

This section presents characteristics of those ten schools which were observed to see the relationship between time distribution in different teaching-learning activities and students learning achievement. The teachers of the observed schools had, on average, about 10 years of schooling. Average teaching experience of them was 4.4 years. The

respective PO categorized half of the schools as 'general', three as 'good' and two as 'excellent'. One half of the teachers were non-Muslim. Average age of the students was 11.5 years. Only about a third of the mothers and 41% of the fathers of the students were ever attended any school. Forty five percent of the students did not get any help for education at home and only 3.5 percent had private tutor. Only 6.3% of the students were non-Muslim.

### **Different teaching-learning activities in BRAC schools**

A list of teaching-learning activities in BRAC schools was identified through discussion and then finalised through classroom observation. These are as follows:

1. Assembly and reciting national anthem
2. Roll call
3. Investigation of previous knowledge
4. Pertinent discussion
5. Textbook reading by teacher
6. Textbook reading by students
7. Teacher asking for class task
8. Individual work by students
9. Group work by students
10. Correction of class work
11. Blackboard use by teacher
12. Blackboard use by students
13. Co-curricular activities
14. Correction of home task
15. Teacher asking for home work
16. Evaluation

Any other activity, besides the above, was categorised as 'others'

**Description/definitions are as follows:**

1. *Assembly and reciting national anthem:* The students sing national anthem unitedly. They can recite from the religious books too.
2. *Roll call:* The teacher keeps the attendance of the students through roll call at this stage.
3. *Investigation of previous knowledge:* At the beginning of the class, the teacher asks the students some easier questions to investigate their previous knowledge. She can ask questions from the lessons of the previous day. All the students or some of the students may be asked. The teacher can ask the students to write down too. In fact, it is an evaluation.
4. *Pertinent discussion:* At this stage, the teacher begins to present the lesson of the day. She can start through a topic related to the lesson. The teacher delivers speeches to the students. She asks questions as well as uses the blackboard.
5. *Textbook reading by students:* According to the instruction of the teacher, all the students or a single student read(s) from the textbook. The teacher and the students can read unitedly.
6. *Textbook reading by teacher:* The teacher reads a certain lesson and the students listen that. At the same time, she can make understand the lessons to the students.
7. *Teacher asking for class task:* The teacher gives tasks to the students to solve in the classroom through oral dictation or writing on the blackboard.
8. *Individual work by students:* The teacher throws a certain problem to all the students to solve and they work on individual copybook.
9. *Group work by students:* The students are divided into some groups, different groups are asked to solve different problems. The teacher observes students' work moving around the classroom.
10. *Correction of class work:* The teacher corrects the class tasks of the students. Here, she can ask questions, make understand to evaluate the students. She can invite one or more students to help her by checking the class tasks of the other students.

11. *Blackboard use by teacher:* The teacher uses the blackboard to solve problems, gives class task and home task. The board can be used by the teacher for showing any chart or picture.
12. *Blackboard use by students:* At the invitation of the teacher, the students use the blackboard of the classroom. They solve problems or correct other's work or write something on the board.
13. *Co-curricular activities:* The students can sing songs, dance, recite, draw pictures, role-playing, tell stories, and jocks etc. They can play word-making, games etc.
14. *Correction of home task:* The teacher corrects home tasks done on copybooks (*khatas*) or slates of the students.
15. *Teacher asking for home work:* The teacher gives home task through oral dictation or writing on the blackboard.
16. *Evaluation:* The teacher evaluates the students whether they understand the lessons or not. She can do it while she investigates previous knowledge, delivers pertinent discussions, corrects class task, uses blackboard, etc.
17. *Other activities:* Any other activities held in classroom were put under this category. The teacher can spend time dividing the students in groups, take rest for a while before starting a new subject, or she can manage the students through threat.

#### **Activity-wise time distribution**

Percentage distribution of class time in different teaching-learning activities is presented in Table 5. Although the total actual class time under observation in 30 schools was 7,531 minutes, but as more than one activity was occurred at a time so total observed class time reached at 12,610 minutes. This indicates that 67.4% of the actual class time was spent in doing more than one activity. *Evaluation* got the most importance among all other activities in BRAC schools regarding time using, 28% of total time was spent for this. *Individual work by students* and *correction of class work* were identified as the second and third most important activities in BRAC schools (21.8% and 18.9% respectively). *Roll call* took the lowest amount of time among all the activities (0.8%). It can also be

seen in the table that *textbook reading by teacher* and *correction of home task* got less time. These findings have an analogy with another findings, derived from ten schools observing six days each. Here also we see that *evaluation* took the highest time and *roll call* took the lowest amount of time. On the other hand, *correction of class work* by the teacher was the third most occurred activity in the first set of observation, but it went to the fifth position in the later observation. Here students reading of textbook cope up to the third position. This may happen because there was an examination after the second

**Table 5**  
*Distribution of class time by teaching –learning activities*

Name of Activities	Observation of 30 schools each for a day		Observation of 10 schools each for six days	
	Duration in minutes	Percentage of time	Duration in minutes	Percentage of time
Assembly and national anthem	164	2.1	453	3.0
Roll call	64	.8	128	.8
Investigation of previous knowledge	1283	17.0	2082	14.0
Pertinent discussion	1121	14.8	1736	11.7
Textbook reading by teacher	157	2.0	476	3.2
Textbook reading by students	941	12.4	2241	15.1
Teacher asking for class task	540	7.1	866	5.8
Individual work by students	1645	21.8	2744	18.5
Group work by students	600	7.9	1539	10.4
Correction of class work	1429	18.9	2042	13.8
Blackboard use by teacher	1019	13.5	1811	12.2
Blackboard use by students	626	8.3	1034	7.0
Co-curricular activities	365	4.8	735	4.9
Correction of home task	177	2.3	480	3.2
Teacher asking for home task	190	2.5	322	2.1
Evaluation	2110	28.0	3413	23.1
Other activities	179	2.3	487	3.2
Total class time	7531	100.0	14767	100.0
Observed class time	12610	167.4	22589	152.0

set of observation which the teacher and the students knew. The five most time-taking activities in BRAC school classrooms are as follows:

- Evaluation (28%)
- Individual work by students (21.8%)
- Correction of class work (18.9%)

- Investigation of previous knowledge (17.1%)
- Pertinent discussion (14.8%)

### **Time distribution by subject**

Four subjects viz., Bangla, English, Mathematics and Social Studies were taught during the observation. Distribution of time in different teaching-learning activities by subject is presented in Table 6. *Evaluation* got maximum time in Bangla (17.4%), English (16.6%) and Social Studies (19.0%), but in Mathematics *individual work by students* got the highest time (15.9%). *Evaluation* took second highest time in Mathematics (15.4%). This finding has congruence with another finding from observing 10 schools, six days each. In this case, *evaluation* got highest time in Bangla, English and Social Studies classes (23.5%, 30.0% and 26.2% respectively), but it took fourth highest time in Mathematics (16.6%). *Individual work by students* took maximum time in this subject (24.7%) (Annex 6). Considering the data of 30 schools, the five most occurred activities in the classes of different subjects it can be seen that these are mostly similar in case of Bangla and English, however, the activities may differ in position. For instance, *reading of textbook by the students* was the second occurred activity in English classes but it went fifth position in Bangla classes. On the other hand, *individual work by students* and *correction of class work by teacher* were second and third occurred activities in Bangla classes, but these went to fourth and fifth position in the case of English. For Mathematics classes, *pertinent discussion* of the contents and *blackboard use by teacher and students* came out among the five most occurred activities. On the other hand, *investigation of previous knowledge* and *group work by students* got importance in Social Studies classes. Comparing above findings with the observation of 10 schools the following observation can be made:

- Similar to the first the later observation also showed that *evaluation* was the most occurred activity in Bangla, English and Social Studies classes and in Mathematics it was *individual work by students*.
- Unlike the first observation *textbook reading by students* got importance in Bangla, English and Social Studies classes.



- No change was observed in Mathematics.
- In Social Studies, instead of *individual* and *group works by the students*, *textbook reading by students* and *pertinent discussion* occurred more in later cases.

**Table 6**  
*Percentage distribution of class time in different teaching-learning activities by different subject*

Name of activity	Bangla	English	Mathematics	Social Studies
Investigation of previous knowledge	11.2	12.7	6.3	12.3
Pertinent discussion	6.9	6.3	13.1	8.6
Textbook reading by teacher	1.1	1.4	.2	2.4
Textbook reading by students	8.9	15.2	.5	7.4
Teacher asking for class task	5.3	4.4	4.0	3.7
Individual work by students	15.2	11.7	15.9	9.6
Group work by students	2.7	3.1	3.6	9.9
Correction of class work	13.4	9.4	11.2	12.3
Blackboard use by teacher	6.9	7.6	11.2	6.1
Blackboard use by students	2.4	3.0	10.9	2.0
Co-curricular activities	4.5	2.7	2.7	1.9
Correction of home task	.6	2.4	1.6	.8
Teacher asking for home task	1.9	1.3	1.6	1.2
Evaluation	17.4	16.6	15.4	19.0
Other activities	1.2	1.4	1.1	2.0
Total class time (In minutes)	59.1	59.7	63.1	60.7
Observed class time	87.5	100.0	123.3	95.9

### **Time distribution by period**

Table 7 shows time distribution in different teaching-learning activities by period. Maximum time was spent in *evaluating the students* in first, second and third period and it took second highest time in the fourth period. In this period, highest time was spent in *individual work by students*. These findings have dissimilarities with the findings derived from observation of 10 schools. In the later case, *evaluation* got the highest time in first, third and fourth period. It took second highest time in second period (Annex 7). Table 7 shows that in the first period, *textbook reading by students*, *individual work by students* and *correction of class work by teacher* were three main time taking activities. It is necessary to mention here that most of the time English was taught in the first period. In the second period, the maximum time was used for *individual work by students*, *pertinent discussion*, *correction of class work*, and *blackboard use by teacher and students*.

*Correction of class work and individual work by students* were the maximum time taking activities of third period. *Individual work by students and correction of class work* were the maximum time taking activities of the fourth period.

**Table 7**

*Percentage distribution of class time in different teaching-learning activities in different period*

Name of activity	First	Second	Third	Fourth
Investigation of previous knowledge	19.4	14.1	18.7	18.4
Pertinent discussion	13.3	20.9	15.6	10.6
Textbook reading by teacher	3.1	1.2	2.6	1.7
Textbook reading by students	18.3	5.3	13.7	15.0
Teacher asking for class task	6.7	6.8	7.7	8.4
Individual work by students	17.2	25.9	20.3	26.3
Group work by students	7.3	7.7	11.2	6.7
Correction of class work	17.4	18.9	21.5	20.6
Blackboard use by teacher	14.6	16.4	13.1	10.9
Blackboard use by students	7.6	14.2	7.7	3.6
Co-curricular activities	4.2	6.8	2.7	5.8
Correction of home task	6.1	2.2	.5	.4
Teacher asking for home task	1.7	2.8	2.4	3.5
Evaluation	29.4	26.5	34.3	25.6
Other activities	2.5	2.5	2.5	2.1
Total class time	62.4	67.8	56.1	57.1
Observed class time	104.2	115.4	96.9	90.3

### **Relationship between time distribution and performance of the students**

Simple correlation coefficients have been calculated to see the relationship between time distribution in different activities and students' performance (Table 8). The findings shows that the activities such as *assembly and national anthem, textbook reading by students, teacher asking for class task, individual work by students, blackboard use by teacher, correction of home task and teacher asking for home task* are positively correlated with the performance of the students. On the other hand, *roll call, textbook reading by teacher and 'other activities'* are negatively correlated with the performance of the students. The other activities do not have any relationship with the performance of the students.

The above-mentioned findings created confusion. For instance, this exercise identified that time spent in *evaluation* or *investigation of previous knowledge* had no relationship with the performance of the students. On the other hand, a significant positive relationship between time spent in *roll call* and students' performance was established. Other examples are shown in Table 8. Next attempt was to see the important activities occurred in good performing schools compared to those performed poorly. Table 9 shows time distribution in different activities in all the 10 schools along with the average performance of the students.

**Table 8**  
*Correlation between percentage of used time in different teaching- learning activities and the performance of the students*

Activity	Correlation coefficient	Level of significance
Assembly and national anthem	0.28	p<0.001
Roll call	-0.11	p<0.05
Investigation of previous knowledge	-0.10	ns
Pertinent discussion	0.07	ns
Textbook reading by teacher	-0.36	p<0.001
Textbook reading by students	0.31	p<0.001
Teacher asking for class task	0.30	p<0.001
Individual work by students	0.16	p<0.01
Group work by students	-0.04	ns
Correction of class work	-0.00	ns
Blackboard use by teacher	0.27	p<0.001
Blackboard use by students	0.10	ns
Co-curricular activities	-0.04	ns
Correction of home task	0.19	p<0.001
Teacher asking for home task	0.11	p<0.05
Evaluation	-0.07	ns
Other activities	-0.11	p<0.05

ns= not significant at p=0.05

Nevertheless, the most time-consuming activities for the best and the poorest schools were almost same. Similar results have also found when separately analysed for each subjects (Annex 8-11). Among the observed schools, school # 7 achieved the highest score (63.7%) and school # 3 scored the lowest (30.9%). An attempt was made to compare the time distribution between the best and the poorest (among the observed 10

schools) schools by subjects. Table 10 presents the five most time-consuming activities occurred in the best and the poorest schools. For the best school, considering all the subjects, the five most time-consuming activities were *evaluation, individual work by students, correction of class work, blackboard use by teacher* and *textbook reading by students*. For the poorest school, the five most time-consuming activities were similar to the best one. There was difference in position or percentage of time use. Subject-wise separate analysis also failed to see any difference between the two (Table 10).

**Table 9**  
*Time distribution in different activities and average performance of the students of each of the schools separately*

Activities	School1	School2	School3	School4	School5	School6	School7	School8	School9	School10
Investigation of previous knowledge	41.7	17.3	8.5	5.1	9.0	16.7	14.4	8.7	9.2	9.8
Pertinent discussion	21.2	21.4	9.8	2.2	6.4	8.5	13.2	14.9	13.4	6.4
Textbook reading by teacher	5.3	0.3	4.9	2.5	4.5	2.5	3.6	0.8	5.0	2.4
Textbook reading by students	15.3	11.6	12.6	20.0	14.6	13.4	15.7	17.3	16.9	14.0
Teacher asking for class task	7.1	6.7	7.5	7.4	4.3	4.4	9.4	4.1	3.7	3.6
Individual work by students	10.8	12.4	21.2	19.6	12.5	11.0	30.4	24.6	18.6	25.9
Group work by students	13.8	15.6	7.0	4.8	14.5	13.3	8.6	7.5	13.5	4.6
Correction of class work	11.8	12.2	18.2	11.7	8.7	13.9	20.8	13.0	13.9	14.3
Blackboard use by teacher	15.9	12.0	13.6	12.4	9.5	10.8	16.9	14.7	13.8	3.1
Blackboard use by students	14.4	7.1	6.3	11.5	3.5	4.1	1.8	7.6	6.9	6.4
Co-curricular activities	5.3	11.0	5.1	2.2	3.9	2.8	4.8	0.9	5.2	8.0
Correction of home task	3.8	3.9	3.6	2.2	4.5	0.9	5.3	2.7	3.7	1.5
Teacher asking for home task	2.5	2.4	1.9	1.8	1.8	2.2	2.0	3.0	2.0	1.8
Evaluation	30.9	23.1	22.8	13.7	12.0	29.6	29.9	25.9	23.8	19.7
Total	200.3	157.7	143.6	117.8	110.2	134.7	177.5	146.2	150.5	122.1
Average score	29.5	45.0	24.7	48.9	32.0	28.5	50.9	46.0	41.4	35.4
Percentage	36.9	56.3	30.9	61.2	40.1	35.6	63.7	57.5	51.8	44.2
Standard deviation	12.6	12.1	14.7	8.3	9.6	11.5	8.7	8.7	10.9	16.5

**Table 10**  
*Five most time taking activities in the 'best' and the poorest schools*

Subject	Good school	Poor school
Bangla	Individual work by students (25.9%)	Evaluation (28.7%)
	Evaluation (24.3%)	Individual work by students (20.1%)
	Blackboard use by teacher (22.5%)	Correction of class work (18.9%)
	Correction of class work (21.3%)	Blackboard use by teacher (16.9%)
	Group work by students (20.0%)	Textbook reading by students (16.3%)
English	Evaluation (46.4%)	Evaluation (33.0%)
	Textbook reading by students (37.1%)	Textbook reading by students (25.4%)
	Individual work by students (32.2%)	Correction of class work (16.3%)
	Correction of class work (22.6%)	Blackboard use by teacher (11.0%)
	Blackboard use by teacher (16.4%)	Individual work by students (10.7%)
Mathematics	Individual work by students (47.4%)	Individual work by students (41.0%)
	Correction of class work (32.3%)	Correction of class work (19.0%)
	Blackboard use by teacher (23.4%)	Blackboard use by students (16.5%)
	Evaluation (17.6%)	Evaluation (12.6%)
	Teacher asking for class task (13.4%)	Co-curricular activities (11.6%)
Social Studies	Evaluation (30.7%)	Group work by students (23.1%)
	Individual work by students (20.6%)	Correction of class work (18.7%)
	Investigation of previous knowledge (16.7%)	Pertinent discussion (16.4%)
	Correction of class work (11.4%)	Evaluation (15.7%)
	Textbook reading by students (9.0%)	Blackboard use by teacher (13.7%)
All	Individual work by students (30.4%)	Evaluation (22.8%)
	Evaluation (29.9%)	Individual work by students (21.2%)
	Correction of class work (20.8%)	Correction of class work (18.2%)
	Blackboard use by teacher (16.9%)	Blackboard use by teacher (13.6%)
	Textbook reading by students (15.7%)	Textbook reading by students (12.6%)

## Discussion and conclusion

Study on time distribution in various teaching-learning activities in BRAC schools, is new, and this is the first study in this regard. We identified the teaching-learning activities occurring in the classrooms of BRAC schools first. Then, the distribution of time in these activities as well as its relationship with the performance of the students was explored. Sixteen teaching-learning activities were found to occur in the classrooms of BRAC schools. Teaching-learning activities are integrated with each other and it was difficult to find absolute definitions of the terms. The primary list of teaching-learning

activities was developed with the help of RED researchers and BEP specialists. The list was finalised through field test. In this way, the researchers tried to reach nearer to the accuracy in identifying and defining the teaching-learning activities. Still there is a wide scope of discourse about the selected teaching-learning activities and their definitions.

Observation method was used in collecting data for the second objective. As a method, observation is very sensitive. Because, it fully depends on the observers and there is no scope to recheck whether the observation was right or wrong. Research Assistants with some prior skills were recruited. All of them had six months teaching experience in a primary or a secondary school as partial fulfillment of their university degree. So, they were experienced in classroom culture. It was tried to make congruence among the Research Assistants in observing the teaching-learning activities occurred in the classrooms of BRAC schools. A standardised checklist, previously developed with the help of RED researchers and BEP specialists, was used. The observed class time was 67% higher than the actual class time. This was because more than one activity occurred in a single minute and the Research Assistants recorded all the activities for that minute. The characteristics of the observed classrooms provided some important information about the classrooms of the BRAC schools. Subject-wise analysis showed that highest time was spent for Mathematics and lowest for Bangla. This is a good provision as well. Hard subject and easy subject should not get the same time. It was an interesting finding that 80% of Bangla classes were held in the fourth period. It was never taken in the second period. Besides, 86.6% of Mathematics classes were taken in the second and the third periods together and this subject was never taken in the fourth period. There is no fixed class routine for the BRAC schools. The teachers enjoy flexibility in this regard. Nonetheless, the teachers follow an unwritten fixed routine. Mathematics is important but language is also important. Why Bangla should not taken in second or third period like Mathematics? This should be considered by BEP.

*Evaluation (28.0%), individual work by students (21.8%), correction of class work (18.9%), investigation of previous knowledge (17.0%) and pertinent discussion (14.8%)* were the most time-consuming activities in BRAC schools. Besides, the lowest time-

consuming activities were *roll call* (0.8%), *textbook reading by teacher* (2.0%), *assembly and national anthem* (2.1%), *correction of home task* (2.3%) and *other activities* (2.3%). The distribution of time in different teaching-learning activities was almost similar from the views of subjects and periods.

Relationship between time distribution and the performance of the students was examined. Although *evaluation* got maximum time, it was not correlated with the performance of the students. It was very much disappointing. Some other activities, which took more time, were also found unrelated and some important activities were found negatively correlated. Besides, a comparison was done between the best and the poorest schools (among the ten observed schools). It was found that the five most time-consuming activities for the two schools are the same and almost there was no significant difference regarding length of time used in those activities. A question may arise that is it worthwhile to find the relationship between time distribution and students learning achievement? However, we did not find any literature in this regard. If we think that there should be some correlation between these two then where is the weakness? Is it in the methodology? Quality of time used may be a factor, which should be examined. Further study may look into this. During piloting of this study we tried to see both distribution and quality of time used at a time, but we found it difficult to do both together. For the sake of quality of information it was decided to collect data only on time-use. During data collection, it was observed that the performance of the teachers was not equal and they could not perform uniformly in each teaching-learning activity, e.g. *evaluation*. It is an important activity of classroom, but all the teachers do not know the best use of it. That is why, although the teachers use most of the class time in evaluating the students, it was found not correlated to the performance of the students. Then what is the occlusion? It must be the question of quality of time use. Further research should look into each of the activities which takes most of the class time. More specifically, quality of time use and its weaknesses should be examined before explains the relationship between time distribution and students' performance.



### **Acknowledgements**

I am grateful to Mr. Samir R. Nath for his sincere help in every stage of the study. The education researchers of Research and Evaluation Division (RED) and the subject specialists of BRAC Education Programme (BEP) helped me a lot. I am grateful to them. Thanks to the Research Assistants. They did all their activities very sincerely like a tedious work of classroom observation. I am grateful to the students and their parents. Thanks are due to the teachers, POs, Team-in-Charge, Quality Managers (QM) and Regional Managers (RM) for their time and co-operation in collecting data. Thanks to Mr. Hasan Shareef Ahmed for editorial support.

### **References**

- Alam M and Haq MN (2001). Teacher Education. In Chowdhury AMR, Choudhury RK, Nath SR, Ahmed M and Alam M (Editors), *Education Watch 2000: A Question of Quality State of Primary Education in Bangladesh*. Dhaka: Campaign for Popular Education and The University Press Limited.
- BRAC (1999). *NFPE Report*. Dhaka: BRAC.
- Chantavanich A, Chantavanich S and Fry GW (1990). Factors Affecting the Quality of Rural Primary Education. In Chantavanich A, Chantavanich S and Fry GW (Writers), *Evaluating Primary Education: Qualitative Policy Studies in Thailand*. Canada: International Development Research Centre.
- Chowdhury M (1974). *Shushikhak*. Dhaka: Bangla Academy. (In Bangla).
- Government of Bangladesh (1974). *Education Commission Report 1974*. Dhaka: Ministry of Education. (In Bangla).
- Government of Bangladesh (1988). *Education Commission Report 1988*. Dhaka: Ministry of Education. (In Bangla).
- Government of Bangladesh (1997). *Report of National Education Policy Formulation Committee 1997*. Dhaka: Ministry of Education. (In Bangla).
- Haq MN (1999). *Effects of MWTL on Some Selected Primary Schools of Bangladesh*. Dhaka: National Curriculum and Textbook Board and UNICEF.
- Kalam MA, Islam KT, Bareque MA, Ashrafuzzaman SM, Howlader V & Afroz R (Forthcoming). *Evaluation of curriculum towards a research led curriculum development: two studies on mathematics and social studies*. Dhaka: BRAC.
- Miles MB and Huberman AM (1994). *Qualitative data Analysis*. California: Sage Publications.
- Newman WL (1991). *Social Research Method: Qualitative and Quantitative Approaches*. United States of America: Allyn and Cacon.

Vermunt MN and Verloop N (1999). Congruence and friction between learning and teaching. *Learning and Instruction*, 9: 257-280.

## Annexes

**Annex-1:** Check list for the definitions of the different teaching-learning activities

### শ্রেণীর কার্যাবলী পর্যবেক্ষণের চেকলিস্ট

১. সমাবেশ ও জাতীয় সংগীত: শিক্ষার্থীরা মিলিত ভাবে দাঁড়িয়ে শপথ পাঠ করছে এবং তারপর জাতীয় সংগীত গাইছে। ধর্মীয় গ্রন্থ থেকেও পাঠ করতে পারে। শিক্ষক আসার আগেই সমাবেশ শেষ হয়ে যেতে পারে।
২. নাম ডাকা: শিক্ষক শিক্ষার্থীদের নাম ডাকছেন। এটি তিনি প্রথম পিরিয়ডে করে থাকেন।
৩. পূর্বজ্ঞান যাচাই/ আগের দিনের পড়া ধরা: যে কোন ক্লাশ শুরু করার আগে শিক্ষক সহজ কিছু প্রশ্ন করে শিক্ষার্থীদের পূর্বজ্ঞান যাচাই করেন। তিনি আগের দিনের পড়াও ধরতে পারেন। তিনি সবাইকে প্রশ্ন করতে পারেন, আবার কয়েকজনকেও প্রশ্ন করতে পারেন। অনেক সময় তিনি লিখতেও দেন। এটি মূল্যায়নও বটে।
৪. বাড়ীর কাজ দেখা: শিক্ষার্থীদেরকে কিছু বাড়ীর কাজ দেয়া হয়-যা শিক্ষার্থীরা খাতায় বা শ্রেটে করে আনে। শিক্ষক ক্লাশেই এই কাজ দেখেন।
৫. প্রাসঙ্গিক আলোচনা: এ পর্যায়ে শিক্ষক আজকে কি পড়বেন সে সম্বন্ধে আলোচনা শুরুর আগে সম্পর্কযুক্ত কোন প্রসঙ্গের অবতারণা করতে পারেন। যেমন, খাদ্য সম্বন্ধে পড়ানোর আগে তিনি জিজ্ঞেস করতে পারেন, আজ কে কি খেয়ে এসেছে? এরপর শিক্ষক মুখে বলে পাঠ বোঝান এবং শিক্ষার্থীরা তা শুনতে থাকে। এ সময় তিনি প্রশ্নও করেন। তাছাড়া ব্ল্যাকবোর্ডও ব্যবহার করতে পারেন।
৬. শিক্ষক পড়ছেন: শিক্ষক নিজে পড়ছেন, শিক্ষার্থীরা শুনছে। পড়ার সাথে সাথে বোঝাতে পারেন।
৭. শিক্ষার্থীরা পড়ছে: শিক্ষক কোন শিক্ষার্থীকে বা সকল শিক্ষার্থীকে পড়তে বলেছেন এবং শিক্ষার্থীরা পড়ছে। শিক্ষক ও শিক্ষার্থীরা একসাথেও পড়তে পারে।
৮. ক্লাশে কাজ দেয়া: শিক্ষক ক্লাশে সমাধান করার জন্য কাজ দিচ্ছেন। এ কাজ তিনি সাধারণত: বোর্ডে লিখে দেন, তবে তিনি মুখে মুখেও এ কাজ দিতে পারেন।
৯. একা একা কাজ: শিক্ষক শিক্ষার্থীদের সবাইকে একটি সমস্যার সমাধান করতে বলেছেন এবং শিক্ষার্থীরা সেটি করছে। শিক্ষক ঘুরে ঘুরে দেখছেন। এ সময় শিক্ষক কাউকে প্রশ্ন করে বোঝাতে পারেন। শিক্ষক মুখে মুখেও শিক্ষার্থীদেরকে সমস্যার সমাধান করতে বলতে পারেন। এক্ষেত্রে শিক্ষার্থীরা মুখেই বলছে। একজনকে বা সবাইকে একসাথে কাজ দিতে পারেন।
১০. দলীয় কাজ: শিক্ষক শিক্ষার্থীদেরকে দলে ভাগ করে একটি সমস্যা সবাইকে অথবা বিভিন্ন দলকে বিভিন্ন সমস্যা সমাধান করতে বলেছেন এবং শিক্ষার্থীরা তা করছে।
১১. শ্রেণীকক্ষের কাজ দেখা: শিক্ষার্থীরা দলীয় ও ব্যক্তিগত কাজ করার পর শিক্ষক তা দেখছেন এবং প্রশ্ন করে বোঝাচ্ছেন। অনেক সময় শিক্ষক এক বা একাধিক শিক্ষার্থীকে দিয়েও শ্রেণীর কাজ দেখাতে পারেন।

১২. শিক্ষকের ব্লাকবোর্ড ব্যবহার: শিক্ষক ব্লাকবোর্ড ব্যবহার করছেন। এক্ষেত্রে তিনি সমস্যার সমাধান করে দিচ্ছেন, বাড়ীর কাজ দিচ্ছেন বা বোর্ডে কোন চার্ট দেখাচ্ছেন। এ সময় তিনি প্রশ্নও করে থাকেন এবং বোঝাতে পারেন।
১৩. শিক্ষার্থীদের ব্লাকবোর্ড ব্যবহার: শিক্ষক কোন শিক্ষার্থীকে বোর্ডে কোন সমস্যার সমাধান করতে বলেছেন বা অন্য কারো ভুল সংশোধন করে দিতে বলেছেন এবং শিক্ষার্থী বোর্ড ব্যবহার করছে।
১৪. সহ-পাঠক্রমিক কাজ: শিক্ষার্থীরা সহ পাঠ-ক্রমিক কাজ করেছে। তারা শব্দ তৈরির খেলা খেলতে পারে। এটা হতে পারে দেশের নাম, ফুলের নাম, ফলের নাম বা নিজের নাম। তাছাড়া গান, নাচ, আবৃত্তি, ছবি আঁকা, অভিনয়,কৌতুক, গল্প বলা ইত্যাদিও করতে পারে।
১৫. বাড়ীর কাজ দেয়া: শিক্ষক বাড়ীর কাজ বোর্ডে লিখে দিচ্ছেন বা মুখে বলে দিচ্ছেন এবং শিক্ষার্থীরা তা তুলে নিচ্ছে।
১৬. মূল্যায়ন: শিক্ষার্থীরা পাঠ কতটুকু বুঝেছে তা জানার জন্য শিক্ষক প্রশ্ন করছেন। শিক্ষার্থীরা উত্তর দিচ্ছে। পূর্বজ্ঞান যাচাই, গতকালের পড়া ধরা, প্রাসঙ্গিক আলোচনা, ক্লাশের কাজ দেখা, ব্লাকবোর্ড ব্যবহার ইত্যাদি কাজ গুলোর সাথে সাথেও মূল্যায়ন হয়ে থাকে।
১৭. অন্যান্য: শিক্ষার্থীদেরকে দলে ভাগ করা, এক বিষয় শেষে অন্য বিষয় শুরু ইত্যাদি কাজেও কিছু সময় ব্যয় হয়। এছাড়া শ্রেণী ব্যবস্থাপনায়ও কিছু সময় ব্যয় হতে পারে।

Annex-2: Check list for Class room observation

তারিখ:----- শ্রেণী:----- বিষয়:----- পিরিয়ড:----- ক্লাশ শুরু সময়:-----

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
শ্রেণীকক্ষ কার্যাবলী সময়	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
সমাবেশ ও জাতীয় সংগীত	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
নাম ডাকা	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
পূর্বজ্ঞান যাচাই/গতকালের পড়া ধরা	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
প্রাসঙ্গিক আলোচনা	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
শিক্ষক পড়ছেন	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
শিক্ষার্থীরা পড়ছে	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ক্রমে কাজ দেয়া	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
একা একা কাজ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
দলীয় কাজ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
শ্রেণীকক্ষের কাজ দেখা	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
শিক্ষকের ব্রাকবোর্ড ব্যবহার	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
শিক্ষার্থীদের ব্রাকবোর্ড ব্যবহার	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
সহ-পাঠক্রমিক কাজ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
বাড়ীর কাজ দেখা	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
বাড়ীর কাজ দেয়া	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
মূল্যায়ন	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
অন্যান্য	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### Annex-3: Questionnaire

#### Time distribution in different teaching-learning activities in BRAC schools

#### প্রশ্নপত্র

স্কুলের নাম: ----- শিক্ষার্থীর নাম: -----  
রোল নং: ----- তারিখ: ----- সময়: ২ ঘণ্টা

সকল প্রশ্নের উত্তর দিতে হবে  
বাংলা  
প্রত্যেক প্রশ্নের মান ৫

১. আমার মা গল্পে নানা চলে যাবার সময় মা কাঁদতেন কেন?
২. মা বাজানকে বকিতেন কেন?
৩. আমি মনে মনে ভাবিতাম আমার মা কত কি-ই না জানেন"- আমার মা গল্পে সেমাই পিঠা বানানো প্রসঙ্গে লেখক একথা কেন বলেছেন?
৪. নিচের শব্দগুলো দিয়ে বাক্য গঠন কর:

জ্বাল ---

অভিযোগ---

উপুর---

অপটু---

গ্রাহ্য---

গণিত  
প্রত্যেক প্রশ্নের মান ৫

১. হাফিজ সাহেব প্রতি মাসে ৫৭০০ টাকা আয় করেন। তিনি প্রতি মাসে কত টাকা ব্যয় করলে এক বছরে ৫৭০০ টাকা জমা করতে পারবেন?
২. ৪ টি গরুর ও ৩ টি খাসির একত্রে মূল্য ২৫৬৫০ টাকা। ২ টি খাসির মূল্য ৩৭০০ টাকা হলে ১ টি গরুর মূল্য কত?

৩. দুইটি সংখ্যার গুণফল ১৮০। একটি সংখ্যার ৪ গুণ ৪৮ হলে সংখ্যা দুটি কত?
৪. পিতা ও পুত্রের বয়সের সমষ্টি ৬০ বছর। পিতার বয়স পুত্রের বয়সের ৫ গুণ হলে পিতা ও পুত্রের বয়সের পার্থক্য কত?

পরিবেশ পরিচিতি-সমাজ

প্রত্যেক প্রশ্নের মান ৫

১. প্রশাসনিক কাঠামো কাকে বলে? বাংলাদেশে ঢাকার বাইরের প্রশাসনিক কাঠামোর প্রথম স্তর শেষ স্তর কি কি?
- ২.

প্রশাসনিক স্তরের নাম	প্রধানের নাম
মন্ত্রণালয়	
বিভাগ	
জেলা	
থানা	
ইউনিয়ন	

পরিবেশ পরিচিতি-বিজ্ঞান

প্রত্যেক প্রশ্নের মান ২

১. আবহাওয়া ও জলবায়ুর মধ্যে পার্থক্য কি?
২. আবহাওয়ার খবরে যা বলা হয় তার মধ্যে কি কি বিষয় থাকে?
৩. বিম্বুর রেখা কাকে বলে?
৪. কোন স্থান সমূহে সূর্যকিরণ হেলে পড়ে?
৫. আবহাওয়ার পূর্বাভাস জানা থাকলে কি সুবিধা পাওয়া যায়?

ইংরেজী

প্রত্যেক প্রশ্নের মান ৫

১. নিচের শব্দগুলো দিয়ে বাক্য গঠন কর:

Enquiry—

Information—

Know—

Exact—

Live—

২. নিচের বাক্যগুলোকে ইংরেজীতে অনুবাদ কর:

১. এখন আটটা বেজে ত্রিশ মিনিট।

২. সে ফরিদপুরে বাস করে।

৩. ব্লাকবোর্ডের দিকে তাকাও।

৪. তোমাকে অনেক ধন্যবাদ।

৫. এখন কয়টা বাজে?

৩. নিচের অনুচ্ছেদটিকে বাংলায় অনুবাদ কর।

The train is now leaving the platform. Salma is on the train. Her father is standing on the platform. Salma is waving at him from her compartment. She will meet her cousin, Aleya at Dhaka.

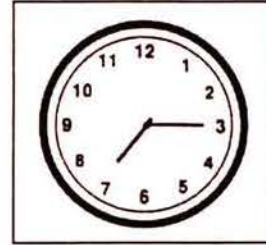
৪. নিচের প্রশ্ন গুলির উত্তর দাও।

a. Who is at the station to see Salma off?

b. When does the Mahanagar Express leave?

c. Where is Salma talking to the man?

d. What time is it now in this watch?



**Annex-4:** Distribution of subjects by period

Subject	Period				Total
	First	Second	Third	Fourth	
Bangla	2 (3.3)	-----	-----	58 (96.7)	60
English	39 (65.0)	7 (11.7)	12 (20.0)	2 (3.3)	60
Mathematics	7 (11.7)	41 (68.3)	12 (20.0)	-----	60
Social Studies	12 (20.0)	12 (20.0)	36 (60.0)	-----	60
Total	60 (100.0)	60 (100.0)	60 (100.0)	60 (100.0)	240

Source: Observation of 10 schools, six days each

**Annex-5:** Distribution of time in different subjects due to different period

Subject	First	Second	Third	Fourth	Total
Bangla	55.0	-----	-----	53.1	53.1
English	73.3	53.7	55.0	49.0	66.5
Mathematics	73.5	64.6	58.4	-----	64.4
Social Studies	75.5	68.0	55.4	-----	61.9

Source: Observation of 10 schools, six days each

**Annex-6:** Percentage distribution of class time in different teaching-learning activities by different subject

Name of activity	Bangla	English	Mathematics	Social Studies
Investigation of previous knowledge	14.8	16.6	11.0	16.3
Pertinent discussion	10.1	8.2	16.5	13.5
Textbook reading by teacher	3.9	2.0	.8	6.7
Textbook reading by students	17.8	29.0	1.5	15.7
Teacher asking for class task	6.0	5.9	7.1	5.1
Individual work by students	22.7	17.9	24.7	12.1
Group work by students	9.2	5.6	6.7	21.5
Correction of class work	12.6	13.5	17.9	13.1
Blackboard use by teacher	14.4	11.9	15.6	9.0
Blackboard use by students	2.9	5.1	17.4	2.5
Co-curricular activities	4.9	4.2	6.7	4.6
Correction of home task	1.2	4.0	6.1	1.7
Teacher asking for home task	2.6	2.1	2.2	2.1
Evaluation	23.5	30.0	16.6	26.2
Other activities	1.7	2.7	6.3	2.4

Source: Observation of 10 schools, six days each



**Annex-7:** Percentage distribution of class time in different teaching-learning activities by different period

Name of activity	First	Second	Third	Fourth
Investigation of previous knowledge	16.3	12.9	14.7	14.6
Pertinent discussion	13.1	13.5	11.5	10.2
Textbook reading by teacher	3.2	2.1	4.3	4.0
Textbook reading by students	21.9	6.2	17.1	18.5
Teacher asking for class task	5.6	6.6	6.1	6.0
Individual work by students	16.7	21.1	17.1	22.7
Group work by students	5.6	11.5	17.6	9.0
Correction of class work	13.0	16.8	14.9	12.5
Blackboard use by teacher	10.7	13.5	12.8	14.1
Blackboard use by students	5.3	13.4	6.6	2.8
Co-curricular activities	6.0	7.7	1.8	4.6
Correction of home task	5.5	5.1	.8	1.2
Teacher asking for home task	1.9	2.0	2.6	2.4
Evaluation	28.7	20.8	23.6	22.7
Other activities	3.4	5.4	2.8	1.7

Source: Observation of 10 schools, six days each

**Annex-8: Percentage distribution of Bangla class time in different activities by schools**

Activities	School1	School2	School3	School4	School5	School6	School7	School8	School9	School10
Investigation of previous knowledge	43.2	10.3	6.8	6.3	14.6	29.4	8.6	12.3	12.6	13.0
Pertinent discussion	16.6	27.5	10.0	2.6	4.5	4.6	14.2	6.1	13.9	2.4
Textbook reading by teacher	5.4	0.5	8.0	4.6	6.5	0.9	0.9	2.2	5.8	4.0
Textbook reading by students	17.1	14.9	16.3	30.0	12.1	17.3	17.5	22.4	17.8	11.1
Teacher asking for class tasks	7.2	5.1	9.5	5.2	6.7	4.0	8.9	3.5	3.9	6.2
Individual work by students	28.3	12.6	20.1	21.3	25.4	8.9	25.9	30.9	24.3	30.7
Group work by students	4.9	17.2	3.5	0.0	11.5	8.9	20.9	8.1	15.5	0.0
Correction of class work	11.7	14.6	18.9	6.6	6.5	6.1	21.3	8.4	9.7	21.7
Blackboard use by teacher	18.0	12.9	16.9	11.5	13.8	13.0	22.5	15.3	15.9	5.2
Blackboard use by students	12.6	4.0	1.4	5.2	0.0	0.0	0.0	1.9	6.4	1.2
Co-curricular activities	3.1	14.3	5.6	6.9	0.0	0.0	4.3	0.0	2.6	10.8
Correction of home task	0.0	0.0	0.0	0.0	9.3	0.0	1.8	0.0	0.6	0.0
Teacher asking for home task	3.6	2.5	1.7	1.4	4.8	2.7	2.1	1.3	3.5	2.1
Evaluation	29.7	21.5	28.7	17.3	5.0	46.1	24.3	25.4	25.0	14.9
Total	201.8	158.6	148.0	119.3	121.1	142.4	173.7	138.4	158.1	123.9
Mean score	6.4	9.5	5.2	8.7	8.5	7.4	10.7	7.0	5.2	8.7
Percentage	32.1	47.8	26.3	43.9	42.5	37.1	53.6	35.3	26.0	43.6
Standard deviation	2.5	3.2	2.3	2.2	2.4	2.6	2.5	2.6	2.7	4.2

**Annex-9:** Percentage distribution of English class time in different activities by schools

Activities	School1	School2	School3	School4	School5	School6	School7	School8	School9	School10
Investigation of previous knowledge	48.0	19.1	9.1	8.9	6.8	11.3	21.0	12.3	10.7	8.4
Pertinent discussion	12.1	20.8	3.3	0.6	1.1	6.4	8.0	8.6	8.8	2.9
Textbook reading by teacher	5.0	0.4	0.9	1.1	2.0	2.2	2.1	0.4	1.2	4.0
Textbook reading by students	27.0	14.5	25.4	24.4	26.7	22.1	37.1	27.1	42.2	22.0
Teacher asking for class task	6.2	7.3	5.0	7.0	2.7	4.4	10.2	4.1	3.4	3.1
Individual work by students	9.5	11.7	10.7	16.8	8.3	14.5	32.2	13.0	28.8	23.4
Group work by students	18.1	7.1	2.8	0.0	2.9	0.0	0.3	6.8	0.0	14.7
Correction of class work	9.2	9.8	16.3	13.9	8.3	12.2	22.6	10.8	9.8	9.2
Blackboard use by teacher	14.2	14.2	11.0	10.2	6.8	5.5	16.4	9.0	17.1	5.5
Blackboard use by students	16.0	2.5	4.8	5.7	0.0	0.0	2.4	2.2	9.2	8.1
Co-curricular activities	0.0	9.8	2.1	0.9	6.5	4.0	0.0	2.6	4.7	5.5
Correction of home task	0.8	5.8	6.0	5.0	3.8	3.3	0.0	3.7	5.0	0.2
Teacher asking for home task	2.6	1.6	1.9	1.3	0.0	2.6	3.4	1.5	2.5	2.3
Evaluation	34.1	26.0	33.0	11.4	14.0	37.0	46.4	20.9	25.4	28.4
Total	203.2	151.2	132.8	107.7	90.4	126.1	202.4	123.6	169.5	138.2
Mean score	7.0	12.3	5.1	12.5	9.1	9.4	11.5	12.0	11.8	8.9
Percentage	35.0	61.7	25.6	62.8	45.7	47.3	58.2	60.3	59.1	44.4
Standard deviation	5.4	3.6	3.9	3.0	3.1	4.0	3.3	3.8	5.0	5.0

**Annex-10: Percentage distribution of Mathematics class time in different activities by schools**

Activities	School1	School2	School3	School4	School5	School6	School7	School8	School9	School10
Investigation of previous knowledge	40.2	16.8	5.4	0.7	4.5	6.5	12.1	2.1	5.9	9.1
Pertinent discussion	20.2	21.5	11.3	2.8	18.0	11.9	12.5	31.3	16.7	15.6
Textbook reading by teacher	0.2	0.2	0.2	0.0	4.2	0.0	0.3	0.2	2.5	0.0
Textbook reading by students	3.2	3.7	0.0	0.0	2.2	1.9	1.6	0.8	1.4	0.4
Teacher asking for class task	8.9	4.6	10.4	11.5	5.4	6.8	13.4	4.0	4.0	1.9
Individual work by students	10.8	13.6	41.0	26.9	14.2	21.0	47.4	34.3	13.5	25.9
Group work by students	13.9	2.0	2.4	5.9	12.2	15.6	5.1	0.8	7.4	0.0
Correction of class work	16.0	13.3	19.0	18.7	11.1	21.3	32.3	20.4	16.9	9.3
Blackboard use by teacher	22.3	9.5	13.3	9.0	14.8	20.8	23.4	27.2	13.1	1.6
Blackboard use by students	20.4	24.4	16.5	29.5	15.7	15.9	5.7	16.6	10.1	14.9
Co-curricular activities	13.0	12.7	11.6	0.5	0.0	0.0	5.4	0.5	10.8	8.1
Correction of home task	6.5	9.3	6.9	2.8	5.4	0.0	12.5	6.2	7.4	3.8
Teacher asking for home task	1.7	3.7	2.2	1.2	3.4	1.4	1.9	4.3	1.2	1.2
Evaluation	26.0	14.5	12.6	5.6	11.1	4.8	17.6	27.7	25.4	13.4
Total	203.9	150.5	153.4	115.6	122.8	128.4	191.6	177.1	136.8	105.7
Mean score	7.3	9.7	5.4	17.0	5.9	5.5	13.5	11.2	7.4	5.6
Percentage	36.7	48.7	27.2	85.0	29.6	27.8	67.8	56.1	37.4	28.2
Standard deviation	4.2	2.9	5.8	3.0	2.1	3.8	3.7	3.4	2.6	3.4

**Annex-11: Percentage distribution of Social Studies class time in different activities by schools**

Activities	School1	School2	School3	School4	School5	School6	School7	School8	School9	School10
Investigation of previous knowledge	37.6	22.3	14.0	4.0	10.2	21.4	15.3	7.6	9.4	9.3
Pertinent discussion	31.2	16.3	16.4	3.4	3.8	10.8	16.7	13.7	12.7	2.7
Textbook reading by teacher	10.8	0.2	13.4	5.2	5.8	6.4	9.0	0.5	12.0	2.4
Textbook reading by students	18.1	12.1	7.7	27.6	14.3	10.6	9.0	17.5	14.0	24.6
Teacher asking for class task	5.9	9.3	5.0	5.5	2.9	2.7	6.5	4.6	3.5	3.8
Individual work by students	3.3	11.8	10.4	12.4	4.3	0.0	20.6	23.9	10.1	23.8
Group work by students	15.0	38.1	23.1	15.5	31.3	29.6	8.1	15.2	34.8	4.3
Correction of class work	9.5	12.1	18.7	5.9	9.0	15.5	11.4	12.2	17.9	18.0
Blackboard use by teacher	9.5	10.5	13.7	20.5	4.3	6.1	9.0	8.1	9.4	0.5
Blackboard use by students	7.9	0.0	0.0	4.6	0.0	1.7	0.0	10.2	0.0	0.0
Co-curricular activities	2.4	7.7	0.0	1.2	7.7	6.4	8.3	0.0	0.0	7.9
Correction of home task	5.1	0.0	0.0	0.3	0.4	0.0	6.5	0.0	0.0	1.6
Teacher asking for home task	2.6	2.2	2.0	3.4	0.0	1.9	1.1	4.9	1.3	1.6
Evaluation	34.1	29.0	15.7	22.6	16.5	29.8	30.7	30.9	18.8	23.0
Total	193.7	172.1	140.6	132.6	111.1	143.4	152.7	150.0	144.3	124.1
Mean of score	8.7	13.3	8.8	10.6	8.5	6.0	15.0	15.6	16.9	12.1
Percentage	43.8	66.9	44.3	53.1	42.5	30.1	75.0	78.1	84.6	60.6
Standard deviation	4.6	4.2	7.9	5.1	3.7	4.4	3.3	5.9	9.0	10.6