

**Progress of Basic Competencies, Literacy and Enrolment of Children in Matlab:
Re-visiting Baseline Villages**

**AKM Masud Rana
Syed Masud Ahmed**

**BRAC-ICDDR,B Joint Research Project
Dhaka, Bangladesh**

Content	Page
Content-----	2
Abstract-----	3
Introduction-----	4
Objectives-----	5
Materials and Methods -----	5
Sample size-----	5
Test Instruments -----	7
Validation-----	8
Reliability-----	8
Results-----	9
Discussion and Conclusion-----	19
Appendices-----	21
References-----	23

Abstract

The Assessment of Basic Competency (ABC) test was administered under BRAC-ICDDR,B Joint Research Project to explore the progress of enrolment, basic competency and literacy of children during the seven years period (1992-1999) under study in rural Matlab, Bangladesh. The test was administered initially in 1992 followed by 1995 and 1999. A total of 749 children was included in 1992 test and followed by 1703 in 1995 and 969 in 1999. All three types of households viz BRAC member, eligible non-member and non-eligible households were included in the samples who were aged 11-15 years irrespective of their enrolment status. The study villages were selected from the 60 villages of baseline survey, where socioeconomic survey was carried out simultaneously. Findings revealed that enrolment has increased from 77% in 1992 to 89% in 1995 and to 93% in 1999. Enrolment of girls was found to be higher than boys in the follow up tests. Both enrolment and drop-out rate was higher among the eligible non-member household's children. The rate of basic competence increased from 17.4% in 1992 to 26.4% in 1995 but dropped to 18.1% in 1999. One notable feature was that the children from BRAC schools did somewhat better compared to children in similar schools elsewhere, being more pronounced in 1995. The gender gap has slightly narrowed down in terms of learning achievement from 1992 to in 1995 though girls were still lagging behind. However in 1999, girls performed better than boys did in learning achievement.

Introduction

Over the last decade, the term 'basic education' is discussed in different forum specifically since 1990 with a special importance. Since, the World Conference on Education for All (WECFA) in Thailand made a declaration that every country should ensure the basic education to their children as a fundamental right of citizens. Since then, all the participating countries have been pursuing different principles in order to achieve this goal. In Bangladesh, development organisations such as BRAC has been working as complementary of government programme to develop this status. Founded in 1972 BRAC a NGO, initiated development work following the Bangladesh war of independence as a relief and rehabilitation organization. Over the years, it has increasingly grown into a large and comprehensive development organization. BRAC initiated its primary education in Bangladesh to complement government education programme in 1985. The prime beneficiaries of the BRAC Education Programme (BEP) are those who dropped out from the schools or never enrolled in any school at all irrespective of BRAC member, eligible non-member and non-eligible households children. However, during enrolment deliberate preference is given to BRAC household children. The philosophy of BRAC Education Programme is to provide basic education, increase enrolment and retention of the children, and narrow the gender gap. Basic education includes some basic skills along with the other cognitive skills i.e. reading, writing and numeracy essential in everyday life for all individuals that can play an important role in economical, social, health and morale development. The Assessment of Basic Competence (ABC) tests were administered under the auspicious of BRAC-ICDDR,B joint Research Project. The Project was launched in 1992 in Matlab a rural area located about 55 kilometer south east of Dhaka the capital city. The objective of this Project is to explore the effects of BRAC programmes on socioeconomic development, health and child education. In order to explore the progress of enrolment, basic competence, and literacy of children this study presents findings from the 1999 test as well as compares the trend of these three fundamental variables with the 1992 and 1995 tests.

Objectives

The objectives of the tests are as follows:

- to explore children's progress in basic competence, literacy and enrolment from 1992 to 1999;
- to measure the effect of BRAC programs if any ;
- to explore the gender and age related differences in terms of learning achievements;
- to diagnose the strengths and weaknesses of children in different domains;

Materials and Methods

All 60 villages sampled in 1992 were included in 1999 repeat survey which collected data on demographic and socio-economic variables. Basic competence study was administered on randomly selected sub sample of households drawn from 14 of the baseline villages in which 1995 seasonal survey were undertaken (Ahmed et al, 1996). Children aged between 11 to 15 years were selected from the BRAC member, eligible non-member and non-eligible households irrespective of their enrolment status. All children from eligible households, including BRAC member and 25% from non-eligible households children were targeted for the test. However, in this paper the comparison is done between BRAC member and eligible non-member household children as the services of BRAC rural development programme are offered only to the poorer households.

Sample size and characteristics of the test participants

A total of 969 children were included in 1999 test. Of these (58%) from eligible non-member households followed by (21%) from BRAC member and rest (21%) from non-eligible households. Majority of children (72%) were studying at formal primary schools (both government and non-government primary schools) while, 7% were studying at BRAC schools and 10% at secondary schools. About 7% children were not studying during the time of test. However, they were either drop-out or not enrolled at any schools at all (Table 1).

Table 1: Distribution of children who included in 1999 test by BRAC eligibility, type of school attended and BRAC membership status of the households

Types of school	BRAC member hhs	Eligible non-member hhs	Non-eligible hhs	All
Government primary school	51.9 (107)	67.7 (379)	56.2 (114)	61.9 (600)
Non-government primary school	14.6 (30)	8.2 (46)	11.3 (23)	10.2 (99)
Kindergarten	-	0.5 (3)	0.5 (1)	0.4 (4)
BRAC school	16.5 (34)	4.5 (25)	4.9 (10)	7.1 (69)
Secondary school	10.7 (22)	6.1 (34)	21.7 (44)	10.3 (100)
Madrasha	2.4 (5)	3.0 (17)	2.5 (5)	2.8 (27)
Not enrolled/drop out	3.9 (8)	10.0 (56)	3.0 (6)	7.2 (70)
All (n)	206	560	203	969

(Figures in parenthesis indicate numbers)

Table 2 shows that in 1992, a total of 403 children from BRAC eligible households were included in the basic competency study. Since the baseline study was done just before intervention began, there was no BRAC member household in 1992. However, in the follow up studies, eligible households are categorised into two groups such as member and non-member since over time, some eligible households joined BRAC organised women's credit and development group known as village organisation (VO). Thus in 1995, a total of 315 children were from BRAC member households and 670 from eligible non-member households. On the other hand, in 1999 in the concluding test, 206 children were from BRAC member and 560 from eligible non-member households. The distribution of children by age, gender, BRAC eligibility and membership status of the households in different years is shown in Table 2.

Table 2: Distribution of BRAC and eligible non-member households' children who included in three tests by gender, age, BRAC eligibility and membership status of the households in 1992, 1995 and 1999

Age group	1992 BRAC eligible		BRAC member				Eligible non-member			
			1995		1999		1995		1999	
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl
11-12	61.9	54.5	44.2	51.3	39.6	42.9	53.9	49.1	53.7	45.5
13-15	38.1	45.2	55.8	48.7	60.4	57.1	46.1	50.9	46.3	54.5
All	215	188	163	152	101	105	330	340	257	303

Test Instruments

In order to assess the basic competency and literacy of the children the test instruments were selected from the life skills, reading, writing and numeracy skills based on the primary education curriculum. In total 43 items were included in the concluding test from the four domains of different aspects. It can be pointed out that in the concluding test some items were excluded i.e. one item from the life skill section and four items from the reading skill section (three words and one sentence). In addition, two items were included in the life skill section these were, whether the children know: a) name of the Prime Minister and b) name of the President of Bangladesh and 'multiple choice answer' of one item was rephrased i.e. gender issue related item: whether girls should go to school like boys. Despite, all the items were mostly similar in three tests. The re-arrangement was done to make the test more valid. The marking scheme was finalized prior to the administration of the test and each test item was given '1' mark for correct answer and '0' mark for incorrect answer. On the other hand, in previous two tests marking scheme was arranged differently where range of mark was 1 to 4 for correct answer.

Defining a minimum level and scoring for satisfying the basic competence

- a) answering 'correctly' at least seven of the ten life skill questions (life skill).
- b) answering 'correctly' at least three of the four questions from the comprehension passage (reading skill).
- c) 'correctly' communicating the message through the letter writing; and (writing skill)
- d) answering 'correctly' at least three of the four questions from the mental arithmetic part (numeracy skill).

Validation of the test

Since the development of the test materials, several tests were administered using similar set of test items in different years. Moreover, before finalizing the test instruments multiple steps are considered to make the test more valid, such as pilot testing and re-arrangements of the test items if necessary. Nevertheless expert opinions are solicited.

Reliability

Cronbeach's Alpha Method was employed to measure the internal reliability of the test. The reliability analysis confirmed that the test was highly reliable, as the overall value of the reliability was 0.96.

Results

This section provides the findings of the test. Table 3 shows that overall enrolment was 93% in 1999. Enrolment of girls was higher among all the three groups. It also shows that non-enrolment and drop out rate was higher among the eligible non-member households (10%) compared to both BRAC (4%) and (well off) non-eligible (3.0%) households children.

Table 3: Percentage distribution of children by their enrolment, gender and membership status of the households in 1999

Enrolment	BRAC member			Eligible non-member			Non eligible			All		
	Boy	Girl	All	Boy	Girl	All	Boy	Girl	All	Boy	Girl	All
Enrolled	95.0	97.1	96.1	88.7	91.1	90.0	96.2	97.9	97.0	91.8	93.7	92.8
Not enrolled	5.0	2.9	3.9	11.3	8.9	10.0	3.8	2.1	3.0	8.2	6.3	7.2
All (n)	101	105	206	257	303	560	106	97	203	464	505	969

Figure 1 gives the overall enrolment status of the children by gender in different years. It clearly shows that enrolment has increased since 1992 across the whole area, irrespective of programme and non-programme vicinity. The enrolment has increased from 77% in 1992 to little over 89% in 1995 and followed by 93% in 1999. It also shows that the enrolment of girls' was slightly higher than boys'. It is interesting to note that in the latter half of the '90s, special initiatives were taken by both government and non-government sectors to increase the enrolment.

Fig 1: Percentage of children who enrolled in the school in different years by gender.

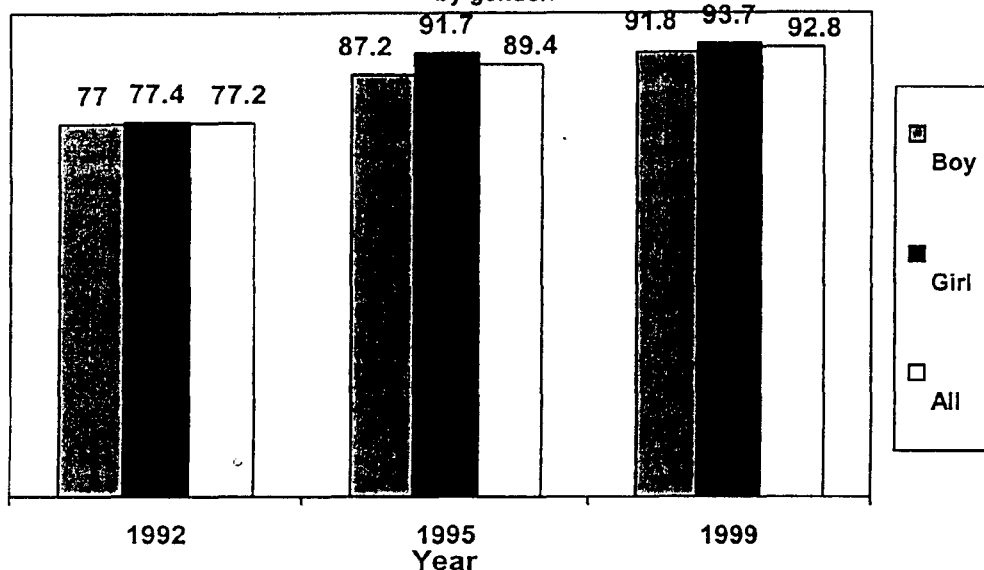


Table 4 presents the enrolment of children by BRAC membership status of the households and gender in three years (only BRAC and eligible non-member). It shows that the increase of enrolment among BRAC member households children was more dramatic compared to the non-member households. In 1992, boys' enrolment was higher than girl's among BRAC eligible household children while in 1995 and 1999 girls' enrolment was found higher than boys' in both groups.

Table 4: Percentage distribution of children by enrolment, gender, BRAC eligibility and membership status of the households in 1992, 1995 and 1999

Enrolment	1992		BRAC member				Eligible non-member			
	BRAC eligible		1995		1999		1995		1999	
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl
Enrolled	69.8	66.5	82.2	95.4	95.0	97.1	81.8	83.8	88.7	91.1
Not enrolled/ drop-out	30.2	33.5	17.8	4.6	5.0	2.9	18.2	16.2	11.3	9.9
All	215	188	163	152	101	105	330	340	257	303

Level of Basic Competence in 1999

Table 5 shows that 18% children satisfied the basic competence criteria in 1999. Among these 29% from well off households followed by 14.6% children from BRAC member households and 15.2% from eligible non-member households. It also shows that the overall performance of BRAC household children was slightly lower than those were from eligible non-member household. While, girls from BRAC households performed better than both BRAC and eligible non-member household boys.

Table 5: Percentage of children who satisfied basic competence criteria by gender and BRAC membership status of the households in 1999

Gender	BRAC member	Eligible non-member	Non-eligible	All
Boy	11.9	16.7	24.5	17.5
Girl	17.1	13.9	35.1	18.6
All	14.6	15.2	29.6	18.1

Trend of Basic Competence in 1992, 1995 and 1999

Figure 2 shows that the overall basic competency increased from 17% in 1992 to 26% in 1995 but dropped in 1999 to 18%. Basic competence of girls increased from 16% in 1992 to 23% in 1995 and dropped at 18% in 1999. This deterioration in 1999 could be due to poor life skill performance. A large number of children failed to satisfy all the four skills criteria altogether.

Fig 2: Percentage of children who satisfied basic competency criteria in different years by sex

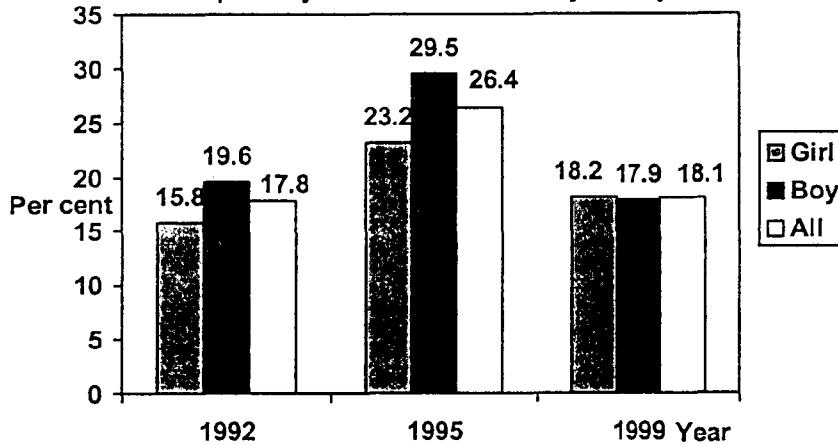


Table 6 shows the trend of basic competence in three tests according to the gender and type of schools attended. Despite secondary school students, notable improvement was observed for BRAC school children in 1995 while it dropped sharply in 1999. This declining trend was observed for most of the educational institution student. Evidence from the data shows that learning achievements of girls increased slightly from 16% in 1992 to 18% in 1999.

Table 6: Percentage of children who satisfied the basic competency criteria in three tests by gender and type of schools attended

Types of school	1992		1995		1999	
	Boy	Girl	Boy	Girl	Boy	Girl
Government primary school	(16.2) 43	(9.7) 25	(16.2) 82	(12.4) 58	(14.1) 40	(13.3) 42
Non-government primary school	-	-	(17.9) 14	(11.4) 8	(13.0) 7	(24.4) 11
Kindergarten	-	-	-	-	(50.0) 5	(100.0) 2
BRAC school	-	-	(47.8) 22	(43.9) 36	(22.7) 5	(19.1) 9
Secondary school	(58.1) 25	(69.0) 29	(76.0) 130	(53.3) 89	(48.8) 21	(52.6) 30
Madrasha	(31.3) 25	(30.8) 4	(34.5) 10	(14.3) 1	(28.6) 6	-
All n	(19.6) 75	(15.8) 58	(29.5) 258	(23.2) 192	(17.9) 81	(18.2) 94

Table 7 gives the basic competence of children in terms of BRAC membership status and gender. The performance of girls from BRAC member households was more dramatic than non-member household children. Moreover, it shows that the improvement of basic competence has more pronounced among girls' than boys' in BRAC member households. On the other hand, the basic competence has decreased among BRAC member household's boys from 30.7% in 1995 to 11.9% in 1999. Whilst the basic competence has increased from 12.4% in 1992 to 14.6% among BRAC households' children and to 15.2% among eligible non-member households' children in 1999 irrespective of gender.

Table 7: Percentage of children satisfying the basic competence criteria by gender, BRAC eligibility and membership status of the households in 1992, 1995 and 1999

Gender	1992 BRAC eligible	BRAC member		Eligible non-member	
		1995	1999	1995	1999
Boy	14.9	30.7	11.9	15.5	16.7
Girl	9.6	23.7	17.1	12.6	13.9
All	12.4	27.3	14.6	14.0	15.2

Table 8 shows that relatively older children performed well in basic competence compared to younger children. The age related difference in terms of basic competence performance was reflected clearly in three tests.

Table 8: Distribution of children who satisfied Basic competence criteria by gender, age, BRAC eligibility and membership status of the households in 1992, 1995 and 1999

Age group	1992		BRAC member				Eligible non-member			
	BRAC eligible		1995		1999		1995		1999	
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl
11-12	12.0	5.8	16.7	17.9	7.5	13.3	9.0	10.8	7.2	10.9
13-15	19.5	14.1	41.8	29.7	14.8	20.0	23.0	14.5	27.7	16.4
All	14.9	9.6	30.7	23.7	11.9	17.1	15.5	12.6	16.7	13.9

Definition of Literacy

In this study, the literacy has been measured as those who: 1) answered correctly any three items of the four items of the comprehension passage; 2) could write given message to their father; 3) answered correctly any three of the four items of the mental arithmetic. A child was considered literate if she/he fulfilled all three criteria.

Literacy (3 R's) Level of Children in 1999

Table 9 shows that overall 28% of children satisfied literacy criteria in 1999. Of these 43% from non-eligible households followed by 25% from eligible non-member and 24% from BRAC member households. Girls performed somewhat better than boys compared to both BRAC and eligible non-member households' boys. Children from eligible non-member households showed slightly better performance.

Table 9: Percentage of children who satisfied literacy (3R's criteria) by gender and BRAC membership status of the households in 1999.

Gender	BRAC member	Eligible non-member	Non-eligible	All
Boy	20.8	24.1	41.5	27.4
Girl	26.7	25.1	44.3	29.1
All	23.8	24.6	42.9	28.3

Trends of Literacy (3R's) Over Time

Table 10 demonstrates that literacy increased from 15% in 1992 to 24% in 1999, among all the eligible households' children including BRAC members and non-members. The increase was more dramatic in 1995 where 40% of BRAC households and 26% of eligible non-member household's children satisfied literacy criteria. In 1999, girls performed better than boys' in the literacy competence irrespective of member and non-member categories, whereas they were lagging behind than boys in previous both tests. However, it also presents that since 1995 literacy level of BRAC households' children has deteriorated markedly.

Table 10: Percentage of children who satisfied the literacy (3R's) criteria, by gender, BRAC eligibility and membership status of the households in 1992, 1995 and 1999

Gender	1992 BRAC eligible	BRAC member		Eligible non-member	
		1995	1999	1995	1999
Boy	19.1	46.0	20.8	27.9	24.1
Girl	10.6	34.9	26.7	25.0	25.1
All	15.1	40.6	23.8	26.4	24.6

Table 11 shows that literacy level of children increased in 1995 followed by substantial unexpected decline in 1999. For instance, 50% of boys and 51% of girls from BRAC schools passed the literacy criteria in 1995. In contrast, in 1999 27% boys and 30% girls passed these criteria. Children from BRAC schools did somewhat better compared to their counterparts. In 1992 there, were no BRAC schools in this area thus no figure appears in that column. An important reason of decrease after 1995 could be that during this time authorities gave less emphasis on quality of education compared to enrolment. Specifically, preference was given mostly for expansion and wider coverage.

Table11: Percentage of children who satisfied the literacy criteria in 1992, 1995 and 1999 by gender and type of school attended

Types of school	1992		1995		1999	
	Boy	Girl	Boy	Girl	Boy	Girl
Government primary school	(21.4) 57	(11.2) 29	(34.9) 176	(22.8) 107	(23.9) 68	(23.7) 75
Non-government primary school	-	-	(33.3) 26	(30.0) 21	(20.4) 11	(35.6) 16
Kindergarten	-	-	-	-	(100.0) 2	(100.0) 2
BRAC school	-	-	(50.0) 23	(51.2) 42	(27.3) 6	(29.8) 14
Secondary school	(67.4) 29	(76.2) 32	(94.2) 161	(86.2) 144	(72.1) 31	(70.2) 40
Madrasha	(37.5) 6	(30.8) 4	(58.6) 17	(71.4) 5	(38.1) 8	-
All (%) n	(24.9) 95	(17.7) 65	(46.1) 403	(38.5) 319	(27.4) 127	(29.1) 147

Overall Learning Achievements of Children in Different Skills in 1999

Table 12 shows that children from BRAC member households performed better than their counterpart children from eligible non-member households in life skill and writing skill. In the reading skill, both groups performed similarly while in case of numeracy skill, children of eligible non-member households performed somewhat better. Gender discrepancy was in favour of girls in three skills with except in the numeracy. It also shows that grater number of children could not satisfy all the four skills altogether (basic competence criteria) though many children fulfilled each skill criteria singly.

Table12: Percentage of children who satisfied different skill criteria by gender and BRAC membership status of the households in 1999

Skills	BRAC member hhs			Eligible non-member hhs			Non eligible hhs			All		
	Boy	Girl	All	Boy	Girl	All	Boy	Girl	All	Boy	Girl	All
Life skill	38.6	45.7	42.2	30.0	31.4	30.7	37.7	58.8	47.8	33.6	39.6	36.7
Reading skill	28.7	36.2	32.5	31.9	33.0	32.5	51.9	55.7	53.7	35.8	38.0	36.9
Writing skill	37.6	50.5	44.2	32.3	34.7	33.6	50.0	59.8	54.7	37.5	42.8	40.2
Numeracy	87.1	75.2	81.1	87.9	70.6	78.6	92.5	81.4	87.2	88.8	73.7	80.9
All four skills	11.9	17.1	14.6	16.7	13.9	15.2	24.5	35.1	29.6	17.5	18.6	18.1

Trends of Learning Achievement in Different Skills Over Time

Table 13 shows that in the life skill section, children performed poorly with the passing of years while improvement occurred in other three domains during the study period. In 1999, the performance of girls' was better than boys' in the three domains i.e. life skill, reading and writing skills except numeracy whereas, on previous occasion girls performed better than boys in the life skill section alone. Children from BRAC member households did better than eligible non-member household children in life skill and writing skill. Whilst, in the reading skill children from both households showed similar performance. The performance of numeracy skill was much better than other three skills among all the children.

Table 13: Percentage distribution of children satisfying the different skills criteria by gender, BRAC eligibility and membership status of the households in 1992, 1995 and 1999

Skills	1992		BRAC member				Eligible non-member			
	BRAC eligible		1995		1999		1995		1999	
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl
Life skill	42.8	48.6	39.9	40.8	38.6	45.7	22.1	23.5	30.0	31.4
Reading skill	32.6	25.0	49.7	45.4	28.7	36.2	32.4	28.2	31.9	33.0
Writing skill	22.8	14.9	51.5	44.7	37.6	50.5	38.5	35.6	32.3	34.7
Numeracy	84.2	64.4	87.1	69.7	87.1	75.2	83.0	60.9	87.9	70.6
All	14.9	9.6	30.7	23.7	11.9	17.1	15.5	12.6	16.7	13.9

Table 14 gives the facility values of each item in different years by gender to find out the strength and weaknesses of the children's performance in different items. It shows that performance of children in some of the items was found to have similar trend in three tests such as 'easy treatment for diarrhoeal disease' and 'preference of drinking water' (What water should we drink?). Since, the item preference of drinking water was relatively easier to the children and had no discrimination between top 27% and bottom 27% children therefore, the item has been excluded from the concluding test in 1999 (Appendix 3). Though, facility values of some items have decreased drastically in the follow-up tests, for few items the values have increased as well. It was also observed that facility values of some important items in the life skill section were quite low. For instance, benefit of child immunisation (26%) and preventive knowledge of night blindness (28%). However, the lowest score achieved in the item: name of the President of Bangladesh, only 7.4% children answered this item correctly. Another finding shows that when multiple choice answer of one life skill item was rephrased in the concluding test, the facility value of this item dropped from 98% to 50%.

Table 14: Facility values (% of children who answered each item correctly) of different items in 1992, 1995 and 1999 tests by gender

Items	1992			1995			1999		
	Boy	Girl	All	Boy	Girl	All	Boy	Girl	All
Life skill									
What is a good and easy treatment for diarrhoea?	77.7	74.7	76.2	86.5	85.4	86.0	86.6	91.1	89.0
What food helps prevent night blindness?	20.9	17.7	19.4	29.4	28.2	28.8	41.2	43.6	42.4
How can water be made drinkable?	73.3	71.9	72.6	64.5	60.3	62.5	75.2	75.4	75.3
What water should we drink?	99.2	99.2	99.2	99.0	99.5	99.2	Dropped in 1999		
Where should one defecate?	58.4	57.8	58.1	42.6	36.9	39.8	59.9	58.4	59.1
What benefit comes from vaccination for child?	33.8	33.2	33.5	28.3	25.3	26.8	31.5	39.2	35.5
How many brothers & sisters should there be in family?	41.6	52.9	47.1	45.4	49.5	47.4	28.2	30.9	29.6
Do you think like boys, girls should go to schools (Gender issue)	96.6	98.9	97.7	98.7	98.8	98.8	44.8	56.0	50.7
Do you know what prevents poultry and livestock from falling ill?	62.0	58.6	60.3	40.6	46.1	43.3	31.7	41.2	36.6
If someone get a high fever what should one do at first.	67.8	76.6	72.1	40.7	42.6	41.7	69.4	75.6	72.7
Do you know the name of the president of Bangladesh?	Included in 1999 only						10.1	5.0	7.4
Do you know the name of the prime minister of Bangladesh?	Included in 1999 only						73.5	63.2	68.1
Reading skill									
Mother	73.6	68.1	70.9	85.7	84.4	85.3	84.1	87.9	86.1
Marriage	62.6	54.5	58.6	65.9	62.0	64.0	Dropped in 1999		
Pond	64.1	55.0	59.7	72.1	69.5	70.8	71.6	75.2	73.5
Rainy season	53.9	42.2	48.2	59.6	56.1	57.9	Dropped in 1999		
Freedom	44.2	32.7	38.6	52.7	48.7	50.8	54.5	54.3	54.4
Joy	57.9	46.0	52.1	65.0	59.3	62.2	Dropped in 1999		
Saving	40.1	28.9	34.6	42.0	34.7	38.6	44.0	44.4	44.2
Co-operation	52.1	39.8	46.1	53.2	43.9	48.7	56.3	57.8	57.1
Five trees fell down in the storm.	54.7	42.8	48.9	61.2	56.5	58.9	52.6	52.7	52.6
Let us go to school.	41.6	33.8	37.8	50.3	43.5	47.0	Dropped in 1999		
What does Gafur Miah cultivate in his land?	54.7	44.4	49.7	67.3	63.2	65.3	59.7	63.2	61.5
Where does he save money?	53.4	44.4	49.0	61.7	55.5	58.7	54.7	58.0	56.4
How many members are there in his family?	39.5	32.7	36.2	48.2	42.3	45.3	29.1	33.5	31.4
Why small family is happy family?	22.0	16.3	19.2	33.5	27.3	30.5	25.2	23.2	24.1
Writing skill									
Own Name	75.9	72.2	74.1	86.6	84.4	85.6	87.1	90.1	88.6
Name of own Village where she/he lives	55.5	43.1	49.4	61.9	56.5	59.2	58.2	62.2	60.3
Water	60.5	52.3	56.5	67.4	61.5	64.5	64.0	69.5	66.9
Education	40.3	30.2	35.4	44.4	37.2	40.9	47.0	50.3	48.7
Bangladesh	55.0	45.5	50.3	59.3	55.7	57.5	63.6	68.5	66.2
Writing a sentence	41.6	33.0	37.4	38.9	37.8	36.7	39.0	46.3	42.8
Salutation	31.7	21.8	26.8	46.6	41.6	44.2	41.2	46.1	43.8
Message	25.2	18.9	22.2	55.3	49.7	52.6	37.5	42.8	40.2
Finish	26.2	20.2	23.2	20.1	19.3	19.7	25.4	32.7	29.2
Numeracy Skill									
Counting number (40-50)	92.7	76.3	84.6	91.4	81.3	86.5	89.7	83.4	86.4
Number recognition '3'	89.5	84.7	87.2	94.2	92.2	93.2	95.7	94.7	95.1
Number recognition '49'	58.1	42.0	50.2	64.5	50.1	57.5	63.8	55.0	59.2
Number recognition '500'	72.3	56.1	64.4	77.5	64.5	71.2	73.3	68.1	70.6
Writing number '5'	80.4	78.7	79.6	87.9	87.7	87.8	89.2	89.9	89.6
Writing number '67'	57.3	38.4	48.1	57.1	44.5	51.0	61.4	55.0	58.1
Writing number '208'	52.6	36.8	44.8	56.3	40.7	48.7	61.0	49.9	55.2
Addition	62.3	47.7	55.1	66.5	57.1	61.9	64.0	59.2	61.5
Subtraction	39.0	21.0	30.2	34.7	25.6	30.2	36.6	27.9	32.1
Mental Addition	94.8	80.7	87.9	95.8	87.1	91.5	85.6	77.6	81.5
Subtraction	94.0	79.0	86.6	97.3	88.8	93.1	92.0	81.6	86.6
Multiplication	87.7	70.6	79.3	89.8	74.2	82.2	88.8	75.4	81.8
Division	47.1	25.1	36.3	48.7	27.1	38.2	89.0	73.5	80.9

Discussion and conclusion

In collaboration with UNICEF in 1992 Assessment of Basic Competencies test materials were developed to explore the basic competence and literacy of children. Following the inception of this collaboration several tests were conducted in different years using similar instruments. This test is third initiative in assessing progress of basic competency and literacy of children in Matlab while two tests were conducted previously thus comparison is done based on earlier tests. The findings reveal that basic competence has increased from 1992 to 1995 and declined in 1999. The reason of rise in basic competency and then gradual decline is probably due to life skill component of the test. However, the deterioration in life skill performance could be due to the rearrangements made in the 1999 test, such as exclusion of one life skill item and inclusion of two items. Moreover, the multiple-choice answer of one item was rephrased. It is seen that the excluded item had a high facility value in previous two tests. Similarly, the item, which was rephrased in the 1999 test also, had a high facility value in the previous tests. Probably due to rephrasing this item, the facility value decreased sharply. It implies that language difficulty is an important factor that can effect test performance. Another feature was that when learning achievement was measured according to different skills, BRAC households' children were ahead of eligible non-member children in every skill. Surprisingly, the children who passed each skill criteria separately, failed to satisfy the basic competence criteria (four skills altogether) thus their rate of basic competence decreased than their peers non-member households' children. Earlier tests, which administered in 1992 and 1995 in the area found that the overall learning achievement and enrolment of girls from eligible families were lagging behind than boys. Though in 1999, the performance of girls found to be universally better while girls from BRAC schools were still lagging-behind their peers (boys) from BRAC schools. Encouragingly overall the previous trend has changed and girl's enrolment increased relative to boys and they showed better performance. It can be pointed out that for the last couple of years some positive discrimination such as offering girls financial incentives in secondary education (in rural area) and special encouragement in both non-formal and formal primary education were promoted. This enabling environment has given opportunities for the girls to perform better in academic achievement. Another interesting worth

mentioning fact that some children who never enrolled in school could correctly answer some life skill and numeracy skill items, failing to answer reading and writing skill items. To compare children performance by types of school is an important step to measure its effectiveness. As comparative analysis showed, BRAC's education system could play a better role in providing basic education compared to the formal system. Moreover, findings explicitly revealed that the overall quality of education was not encouraging in both formal and non-formal setting as the majority of the children neither satisfied the basic competence (82%) nor literacy criteria (72%). Ostensibly, at present the crucial issue in the primary education system is its quality and standard. Nath, S.R. (2000) pointed out that the quality of basic education provided through BRAC education programme decreased gradually since then quality of education was not emphasised much with the expansion of the programme. Similar problem may prevail in the mainstream primary education as well.

However, it may be mentioned that different studies reveal learning achievement depends on a wide range of factors. Lockeed et al (1991) found that effective pedagogy, proper use and duration of instructional time and relevant curriculum are associated with the learning achievement. It is recognised that total duration of learning hours in primary education in Bangladesh is one of the lowest in the world and inadequate for achieving the ambitious learning outcomes (Conference on Universal Primary Education in Bangladesh, 1996). In addition, children motivation to learning, their self-esteem and ethos of school are also crucial that cannot be overlooked. Ethos of school refers to how the school is administered and managed by the concerned authorities. Nevertheless, educational assessment must be taken into consideration. Since, prevailing different assessment systems are not up to the mark to monitor the educational progress of children at different stage. Considering these factors, a comprehensive approach may be offered in teaching and learning system in order to improve the standard of education, which can overcome the present critical situation. Finally, it must be ensured that the school development plan reflects the findings of the tests appropriately because such a reflection can contribute significantly in raising the standard of education.

Appendices

Appendix 1: Enrolment status of the children in 1992, 1995 and 1999 by gender

Enrolment status	1992			1995			1999		
	Boy	Girl	All	Boy	Girl	All	Boy	Girl	All
Enrolled	77.0	77.4	77.2	87.2	91.7	89.4	91.8	93.7	92.8
Not enrolled	23.0	22.6	22.8	12.8	8.3	10.6	8.2	6.3	7.2

Appendix 2: Percentage of children who satisfied the basic education criteria by gender and BRAC eligibility in 1992, 1995 and 1999

Gender	1992			1995			1999		
	Eligible	non-eligible	All	Eligible	non-eligible	All	Eligible	non-eligible	All
Boy	14.9	25.7	19.6	18.5	41.5	29.5	16.3	22.9	17.9
Girl	9.6	22.3	15.8	14.9	33.0	23.2	14.4	33.7	18.2
All	12.4	24.0	17.8	16.7	37.5	26.4	15.3	28.2	18.1

Appendix 3: Facility values (% of children who answered each item correctly) and item discrimination between top 27% and bottom 27% children in 1999

Items	Top 27% children	Bottom 27% children	Discrimination	All Children
What is a good and easy treatment for diarrhoea?	96.9	74.4	.225	89.0
What food helps prevent night blindness?	77.1	13.0	.641	42.4
How can water be made drinkable?	96.6	50.4	.462	75.3
Where should one defecate?	83.6	30.5	.531	59.1
What benefit comes from vaccination for child?	66.4	14.9	.515	35.5
How many brothers & sisters should there be in family?	70.6	30.5	.401	29.6
Gender issue	44.3	14.5	.298	50.7
Do you know what prevents poultry and livestock from falling ill?	57.3	19.1	.382	36.6
If someone get a high fever what should one do at first.	88.5	58.0	.305	72.7
Do you know the name of the president of Bangladesh?	23.3	0.4	.229	7.4
Do you know the name of prime minister of Bangladesh?	93.5	39.3	.542	68.1
Reading skills				
Mother	100.0	50.8	.492	86.1
Pond	100.0	16.4	.836	73.5
Freedom	98.5	0.0	.985	54.4
Saving	96.2	0	.962	44.2
Co-operation	99.2	0.4	.988	57.1
Five trees fell down in the storm.	98.9	0.4	.985	52.6
Reading Comprehension				
What does Gafur Miah cultivate in his land?	100.0	1.9	.981	61.5
Where does he save money?	100.0	0.4	.996	56.4
How many members are there in his family?	76.3	0	.763	31.4
Why small family is happy family	64.9	0.4	.645	24.1
Writing skill				
Name	100.0	59.9	.401	88.6
Name of own village where she/he lives	98.1	5.0	.931	60.3
Water	98.9	8.0	.909	66.9
Education	96.6	0	.966	48.7
Bangladesh	100.0	5.7	.943	66.2
Writing a sentence	90.5	0.4	.901	42.8
Salutation	95.8	0.0	.958	43.8
Message	94.7	0.0	.947	40.2
Finish	77.9	0.4	.775	29.2
Numeracy Skill				
Count number (40-50)	100.0	55.0	.450	86.4
Number recognition '3'	100.0	82.1	.179	95.1
Number recognition '49'	97.3	7.6	.897	59.2
Number recognition '500'	99.2	14.1	.851	70.6
Writing number '5'	100.0	63.4	.366	89.6
Writing number '67'	93.5	14.5	.790	58.1
Writing number '208'	96.6	6.1	.905	55.2
Addition	96.9	9.2	.877	61.5
Subtraction	72.9	26.7	.562	32.1
Mental Addition	97.7	58.8	.389	81.5
Subtraction	98.1	73.3	.248	86.6
Multiplication	98.1	56.5	.416	81.8
Division	97.3	56.5	.408	80.9

References:

- Chowdhury, AMR et al (1991) *The Assessment of Basic Competence of Children*. BRAC, Dhaka, Bangladesh.
- Baseline Survey Matlab (1992) BRAC-ICDDR,B Research Project, Matlab, Dhaka, Bangladesh.
- Nath, S.R (2000) *Basic competencies of the graduates of BRAC's non-formal schools: levels and trends from 1995 to 1999*, BRAC, Dhaka, Bangladesh.
- Lockheed, ME. & Verspoor, AM (1991) *Improving Primary Education in Developing Countries*, Oxford Press, New York.
- Scribner, S & Cole, M. (1981) *The Psychology of Literacy*. Cambridge, Mass: Harvard University Press.
- Pring, R (1995) *Educating Persons: Putting Education Back Into Educational Research* (The 1995 SERA Lecture), *Scottish Educational Review* 27(2), UK.
- Quality Primary Education For All (1996): Report of the Conference on Universal Primary Education in Bangladesh 1996*, Dhaka, Bangladesh.