



**GOVERNMENT OF THE PEOPLES' REPUBLIC OF
BANGLADESH
DIRECTORATE OF NON-FORMAL EDUCATION
PRIMARY AND MASS EDUCATION DIVISION**

NAME OF THE PROJECT:

**DEVELOPING LEARNING METHOD AND
MATERIALS BASED ON BENGALI PHONEMES**

**ADB/SDC NFE TA PROJECT
Dhaka, Bangladesh**

Project Manager:

Association of Canadian Community Colleges (ACCC), CANADA

In Association with Pathmark Associates Ltd. and
Development Planners & Consultants, Bangladesh.

Directorate of Non-formal Education of Bangladesh under its ADB/SDC NFE TA project took up a research project to develop a learning method and reading materials based on sounds of word i.e. phoneme.

Senior Core Trainer of the project Dr Jesmin Ara Sultana, who is a Bengali linguist, conducted the research and developed a method, primarily proved to be very effective and easy for the nonreaders. Dr Jesmin was basically inspired by the Phono-Graphix method developed by Carmen McGuinness and Geoff McGuinness of America, who developed similar learning method for English spoken people. Dr Jesmin first prepared reading materials using Bengali phonemes and then these materials were taught at a school of 30 nonreaders to test the acceptability and effectiveness of the materials. Details of the project are as follows:

Name of the project: Developing Learning Method and Materials based on Bengali Phonemes.

Background: Learning to read is one of the most difficult tasks the human being faces in his/her life. Both the children and the guardians have to go by a lot of labor and difficulties to acquire the skill. It takes months after months to teach a nonreader how to read and write.

In teaching the nonreaders two things are involved: (1) Reading materials and (2) Teaching method.

Evolution of better teaching materials and method can reduce the time, the nonreaders are presently taking, in acquiring the reading and writing skill.

There are a huge number of nonreaders outside the purview of formal education system in Bangladesh. The government has undertaken massive programmes to bring the illiterate people under education system through non-formal education programme. The Department of Non-formal Education has been entrusted with the task to bring the millions of aged, juvenile and child illiterate persons under the programme.

It requires nearly 288 hours to teach the illiterate persons the techniques of reading and writing using present materials and method. Such a longtime requires involvement of a huge amount of money and labor. If we reduce the time span (say 90 hours), we would be able to teach three times more illiterate people in the mentioned period, and by almost same cost.

What is being taught at present:

Two methods are in practice for teaching the beginners. These are: (a) Phonics method (b) Whole method. The reading materials in these two methods are also designed accordingly.

The Phonics method deals with letters' name and it requires memorization of letters name. It is a letter to sound correspondence method.

The theory behind the Whole Language method is that the nonreaders don't need to know the code to read. In fact the inventors of the method believed that written code of a language is too complex to be learnt. They believed that nonreaders could recognize all other familiar objects in our visual world. But it does not work. Reading is not based on visual stimulus but on an oral one, the sound.

It has been found that the primers being used by DNFE is based on a combination of whole and phonics methods.

In primer Chetona (Name of the Bengali primer being used by DNFE), the learners are first told a story of a family. The learners then introduced with letter /c/ (p) from the word cwievi (family). Accordingly, the lessons are progressed with introduction of Bengali letters and signs in a haphazard manner.

I think here there are two objectives. Firstly to give the learners a definite message and secondly, to introduce (in a haphazard manner) letters and signs.

Now the basic question is that which one is the first and foremost objective of the teaching programme – to give message or teach the techniques of reading and writing.

I think, our first and foremost priority should be to teach the techniques of reading and writing in the shortest possible time. If we can teach the beginners the techniques of reading and writing, they would themselves be able to get messages and information through reading stories and related books.

Learning is more than introduction to letter names

Learning is not only a process of introduction to letters to the students. In learning three types of awareness are needed. (a) Auditory awareness – Manipulating the sounds in words, (b) Segmenting – Separating phonemes from each other and (c) Blending – Joining the isolated phonemes into words.

Good reading programmes use materials that correspond to the nonreaders developing expertise in mastering alphabet code. The sooner the nonreaders master the alphabet code, the sooner they will be able to read anything in print.

Moreover, there is a speech pattern in every language, including Bengali. There is also a sequence of understandability and acceptability of Bengali alphabets and diphthongs. If the sequence breaks, the learning process would be hampered. For better understanding of speech pattern, we can cite a unique example. When babies begin talk they babble in CV (Consonant-Vowel) units: Ba-Ba, Ma-Ma etc. Most of the language, including Bengali, contains this type of pattern.

However, literature containing digraphs, consonant clusters, phonograms and irregular spelling is difficult for the beginners to understand. So introduction to letters and signs in a haphazard manner may have withdrawal effect on the beginners.

To overcome the difficulties and make the learning process easier, the researcher has undertaken the project to develop a method and reading materials based on a true linguistic programme.

The method deals with sounds. Because, according to linguists, letters are the pictures of sound. Sounds have been existed much before than letters. Even there are numerous languages, which have no letters. Besides, every person, literate or illiterate, after attaining a certain age (say after two years) can speak in his/her mother tongue. That is, a nonreader may not able to read or write a specific word, but he may know the meaning of the word and pronunciation of the same. So, it is thought that if the beginners were guided to catch the sound/sounds in a word separately and unglue them, the learning process would be easier.

Objectives of the research project

- 1) To develop a phoneme-based method for Bengali speaking beginners
- 2) To study the suitability of phoneme method
- 3) To prepare materials using the phoneme method for teaching the beginners the technique of reading and writing in 90 hours and
- 4) To prepare guidebook for teachers about the method.

Methodology

As Bengali language is being spoken in wide range of dialects, testing of the method in various locations of the country would yield maximum result. Therefore, four locations were proposed in four geographical locations of the country viz. Dhaka, Bogra, Rajshahi and Jessore.

Students: Nonreaders from six to 45 years of age would be included in the programme. Fifty percent of the students would be taken from women and in each group there would be 30 students. While selecting and conducting the research following steps would be followed:

- Materials developed following Bengali phoneme would be taught in all the schools (centers);
- The length of the course would be 90 working hours;
- Students would be absolutely illiterate;
- In four schools there would be 120 students;
- Four teachers and a supervisor would be first given training on the method;
- Teacher would conduct the classes and supervisor would visit the center once a week to monitor the progress. He will also give on the spot solution to the problems;
- The researcher will visit all the centers as frequently as possible to monitor the teaching method and give suggestions for further development of the method;
- The findings would be presented at a national workshop in Dhaka. If found suitable a good primer would be written based on the research findings.

Out of four proposed centers, one center was established in Dhaka in March 1999. Following steps are followed in conducting the school:

- 1) 30 fully illiterate students between 6 to 14 years of age were selected;
- 2) One teacher and a supervisor were given training on the techniques of presentation of the materials.
- 3) The teacher took the classes while the supervisor monitored the reactions of the students and noted down the difficulties they faced. He also identified problems and barriers in presenting the materials.
- 4) The researcher herself visited the center frequently to identify problems of demonstration of the materials and make on the spot solution to those problems.
- 5) The researcher with the help of supervisor and teacher made necessary modifications in the materials and presentation method.

The class teachers used movable alphabet (built by cutting art paper), calling card, marker, Whiteboard etc. The students were supplied with reading materials, pen, pencil and paper.

Classes were taken for 90 hours, including the examinations period.

Finally, a literacy material has been developed suitable for nonreaders as well as the beginners.

While presenting the materials developed by the researcher, following matters were considered:

- 1) Acceptability of the sequence
- 2) Acceptability of the words used in the materials
- 3) Understandability of the presentation process and
- 4) Understandability of the basics of learning, auditory analysis, segmenting of words and blending of words.

Evaluation

The purpose of the evaluation was to observe perception of the learners to receive the lessons. In doing this, the researcher followed the traditional examination method. After completion of each chapter a test has been taken based on the lessons of the chapter. Five tests were taken after completion of five chapters and a final test was taken after completion of 90 hours of reading.

Analysis of the test

The tests were designed based on the lessons of the respective chapter. There are written and oral questions.

The score were graded in five categories viz.: **A+, A, B, C** and **D**.

A+ denotes Excellent score with 80 and above marks

A denotes Very Good score securing 70 to 79 marks

B denotes Good score securing 60 to 69 marks

C denotes average score with 50 to 59 marks

D denotes below average score with below 50 marks.

Chapter-One: Identification of sounds in words

A+ <i>Excellent</i>		A <i>Very good</i>		B <i>Good</i>		C <i>Average</i>		D <i>Below Average</i>		Total
No	%	No	%	No	%	No	%	No	%	
3	10	4	13.33	5	16.66	8	26.66	10	33.33	30

Chapter-Two: Identification of sounds in words

A+ <i>Excellent</i>		A <i>Very Good</i>		B <i>Good</i>		C <i>Average</i>		D <i>Below average</i>		Total
No	%	No	%	No	%	No	%	No	%	
3	10	5	16.66	5	16.66	8	26.66	9	30	30

Chapter-Three: Segmenting and spelling of words

A+ <i>Excellent</i>		A <i>Very good</i>		B <i>Good</i>		C <i>Average</i>		D <i>Below average</i>		Total
No	%	No	%	NO	%	No	%	No	%	
4	.33	6	20	8	26.66	5	16.66	7	23.33	30

Chapter-Four: Introduction of clusters, diphthong

A+ <i>Excellent</i>		A <i>Very Good</i>		B <i>Good</i>		C <i>Average</i>		D <i>Below average</i>		Total
No	%	No	%	No	%	No	%	No	%	
0	0	2	6.66	6	20	10	33.33	12	40	30

Chapter-V: Segmenting words into chunks and pronunciation

A+ <i>Excellent</i>		A <i>Very Good</i>		B <i>Good</i>		C <i>Average</i>		D <i>Below average</i>		Total
No	%	No	%	No	%	No	%	No	%	
4	13.33	8	26.66	5	16.66	7	23.33	6	20	30

Overall (Final) Test: **Overall perception of reading and writing**

<i>A+</i> <i>Excellent</i>		<i>A</i> <i>Very Good</i>		<i>B</i> <i>Good</i>		<i>C</i> <i>Average</i>		<i>D</i> <i>Below average</i>		<i>Total</i>
<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>	
4	13.33	6	20	8	26.66	6	20	6	20	30

Total success rate: 80 %

Analysis of the Score

Chapter One : Chapter one deals with identification of individual sound, writing practice of the sound pictures (alphabets), and identification of vowel signs and their functions. There are 11 lessons in this chapter. While analyzing the score of the learners, it was found that at initial stage the learners faced difficulties in identifying the sounds in words and writing those. Ten learners out of 30 i.e. about 33.33 per cent could not grasp the lessons in the stipulated time. 17 learners i.e. 56.66 per cent scored between A to C category marks which mean that the scores were average to excellent. Three learners i.e. 10 per cent made excellent performance.

Chapter two : The reading programme is a repetitive one i.e. the same things return time and again. As a result the students would be able to read one thing several times and thereby easily grasp it.

In chapter two the learners were taught to blend sounds in words and building words by sounds. Writing sound pictures and reading 3-sound individual words were included in the chapter. There are 12 lessons in this chapter.

After completion of the chapter, it was found that the learners made a good progress. Twenty one i.e. 70 per cent scored between average and above average levels. Of the total learners, 60 per cent scored between average and very good level while 3 learners i.e. 10 per cent scored excellent.

Chapter three: Chapter three deals with reading, spelling and segmenting words. There are 13 lessons in this chapter. The test scores of this chapter suggest that the learners were making slow but steady progress in grasping the programme. Out of 30 students on 7 i.e. 23.33 per cent failed to score up to average level and the remaining 76.66 per cent scored average and above average levels. Four made excellent score.

Chapter four: Chapter four is the most complex and thereby difficult chapter of the programme. Consonant and vowel clusters, diphthong and some consonant sounds are introduced in this chapter. The learners faced comparatively much difficulty in this chapter. However, special care and long-time practice (21 hours in 15 lessons) helped the learner make good recovery. The test scores showed that 66.66 i.e. 20 students came out successful in this chapter.

Chapter five: Chapter five is the last stage of the programme. After completion of the previous four chapters, it was assumed that the learners could read the materials containing 3-4 sound words. In chapter five the learners are taught to acquire the technique of segmenting big words and reading skill.

According to the score, it was found that the learners made quite good progress in segmenting the words into chunks. They also have done better in reading. 80 per cent of the learners made average to excellent score. Of them only 7 learners scored in average grade while other 77 per cent above average level. Four scored excellent.

Overall (Final) test: After completion of 78 hours, attempts were made to identify individual weakness of the learners. Individual problems were monitored and the teacher, the supervisor and the researcher herself tried to solve their problems in the next 8 hours. Then a final test was taken. The test was designed to assess the capability of reading and writing skill of the learners and their comprehension capacity.

The final test showed that 24 learners i.e. 80 per cent came out successful. Of them 14 i.e. 40.46 per cent made good to very good score and 4 learners i.e. 13.33 per cent excellent. Only 6 made below average score.

Manpower and Budget

Manpower:

Personnel	Number
Supervisor	I
Teacher	4

Budget (Estimated) :

Personnel	rate per month	Man month	Honorarium
Supervisor	Tk 4,000	3	Tk 12,000
Teachers	Tk 2,000	12	Tk 24,000

			Total Tk 36,000

Logistics:

Items		Taka
Learning materials	120X200X3	Tk 72,000
Transport	10,000X3	Tk 30,000
Venue rent	4X2000X3	Tk 24,000
Refreshments	120X10X90	Tk 108,000
Report writing & Printing		Tk 15,000
Workshop		Tk 25,000
Misc.		Tk. 25,000

		Total Tk 299,000

Grand total : 36,000+299,000 = 235,000
(Tk two lakh thirty five thousand or US dollar 4,700 only)

Outcome: The test scores suggest that the materials are very much compatible for the beginners. 80 per cent of the enrolled students came out successful in the tests taken after completion of the 90 hours teaching. That means that they have been able to segment, blend and comprehend the words, and write simple sentences comprising words up to four words.

80 per cent success may be termed as a good success but the researcher thinks that cent percent success could be achieved through further modification and revision of the method and materials.