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Bengali Sound-Color Fidel and Spelling Charts and Their Analysis

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Bengali Sound-Color Fidel and Spelling Charts

and

Their Analysis

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Abstract

The Sound-Color Fidel represents in color all the sounds of modern Bengali and is designed to facilitate the easy recognition and reproduction of those sounds. The colored Spelling Charts are a group of phonic codes which include all the signs and spellings of written Bengali arranged in vertical columns corresponding to the Sound-Color Fidel. They are designed to organize and simplify the complexities of written Bengali. My paper explains the assumptions about teaching and learning I developed during the production of the charts, my understanding of the sounds and spellings of the Bengali language and their arrangement on the charts and my ideas for teaching with them. I made these charts in the hope of teaching Bengali pleasantly and naturally through the visual aid of colors to foreign learners, illiterate adults, children from illiterate backgrounds, and primary school children.

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INTRODUCTION

> Labour is blossoming or dancing where
> The body is not bruised to pleasure soul,
> Nor beauty born out of its own despair,
> Nor blear-eyed wisdom out of midnight oil.

> W. B. Yeats, "Among School Children"

The above lines have always appealed to me as the essence of and criteria for all human activity. If the acquisition of human skill involves only a life-long and painful drudgery without yielding positive and pleasurable results, it does not seem to me a worthwhile endeavor. Yeats wrote the above lines in a poem after visiting a Montessori school for children, where he had witnessed the participation of children in pleasurable learning activities in which the whole personality of the child was absorbed and integrated in an atmosphere of freedom and spontaneity.

I studied English from the age of 5 and spent years of unceasing labor before I became proficient in its four areas of skill: reading, writing, listening, and speaking. Of these the last two were more difficult and time-consuming because neither was proper care taken by the institutions for their proper attainment nor was I initially in an English-speaking environment. In this way, one can persevere for many years in the acquisition of a language and may even end up as a "don" in the grammatical and theoretical pedagogy without ever actually coming close to the proficiency of a native speaker. That is why I have often wondered about the efficacy of spending so much of my time and energy in mastering a foreign language instead of concentrating on other basic arts and sciences. Now when I find my students passing through the same laborious ordeals without attaining miraculous results at the end of the trial, I have occasion to

question the validity of the processes at work in our traditional system of education.

For these reasons, I started looking for methods which could transform the process of learning into more enjoyable and less time-consuming activities. As I studied and reflected on various methods and approaches during the last academic year, and practiced some of them during my student-teaching internship in Mexico, I discovered that there are some basic principles underlying most of them. Thus, from the Montessori system of education at the beginning of the twentieth century, through the Organic Learning of Sylvia Ashton-Warner in the 1930's to the Silent Way and Counseling-Learning of today, all advocate explicitly or implicitly the subordination of teaching to learning by stimulating the students' intelligence, imagination, and creativity. This is further promoted by delegating to the learners the freedom and responsibility for their own learning. By freedom I mean the ability of the learners to act without physical or psychological interference. From this freedom develops responsibility, the decision of the learners to recognize their potentialities and then act with deliberate choice to promote their learning. As I became familiar with the Silent Way, using the English Sound-Color Chart and the Fidels and producing the Bengali Sound-Color Fidel and Spelling Charts, I found both the charts and fidels useful tools for implementing the principles of freedom, responsibility, creativity and self-education in the learning of languages.[1]

Color has a strong appeal for me. The brightness of the rainbow

[1] The Sound-Color Fidel in other languages is popularly known as Sound-Color Chart and the Spelling Charts as Fidels. This I have reversed for the understanding of my Bengali readers.

exhilarates my heart as it comes out over the dark clouds as the symbol of all the colors of Nature. Similarly, the variegated colors on the Fidel and Spelling Charts seem to hold the keys to the multifarious secrets of human communication. Color has no race or nationality and, therefore, the colored Fidel and Charts offer great potentialities for unprejudiced learning. I must admit, however, my initial skepticism about the usefulness of color in language teaching and about the teacher's restrained authority which is associated with the Silent Way. By restrained authority I mean that the teacher helps the learners develop and practice their latent talents without interfering. (See ch. I, p. 4 for further clarification.) Gradually, however, as my familiarity with the English S-C Chart and Fidels and with the Silent Way increased, I became convinced of the value of colors. In my opinion it is very important for the learners of any language to acquire a good command over the correct sounds of a spoken language in order to function comfortably with fluency and confidence. I think working with the S-C Chart and the Fidels can enable learners to master the sounds and spellings of a language with much greater ease and felicity than can working with any other method.

ASSUMPTIONS ABOUT TEACHING AND LEARNING I DEVELOPED DURING THE

PRODUCTION OF THE BENGALI SOUND-COLOR FIDEL AND COLORED SPELLING

CHARTS

In the past year my previous approaches to teaching and learning have undergone a complete overhauling and as I became more familiar with the Silent Way through teaching and producing the colored charts in Bengali, I developed some new assumptions about teaching and learning in general and about teaching languages in particular. They are as follows:

1. Firstly, I think a language teacher must not only be a specialist in a language, but must also have a continually growing awareness of the process of learning. This requires a lot of training, maturity, and patience on the part of the teacher. While he/she remains in full control of the learning situation, understanding, inspiring, and guiding the inherent capabilities of the learners, he/she must try to create the impression of only playing a passive and subordinate role, allowing the learners to take the responsibility for their own learning and bringing all their faculties to full play. In fact, the teacher's role should be only that of an experienced supervisor ready to serve the learners when and however needed.

2. Secondly, it is necessary for the teacher to generate a sense of freedom and independence in the learners in order to enable them to develop and utilize their natural talents to the fullest and to function as self-educating and self-correcting language learners. (See Introduction, p. 2, for definition of freedom and responsibility.)

3. As a result of my reading and use of the Fidels and the S-C Chart in English, I have come to believe that the intellectual and imaginative

faculties of learners can be triggered through the stimulation of the senses. This view reflects Aristotle's philosophy that all human activity, including intelligence, originates in the senses. I find it appropriately expressed by Maria Montessori as follows:

> Through systematically working in successive steps with the sensory apparatus, and developing and refining the five senses, the child builds a solid foundation for his intellectual activity.[2]

According to her, the first organs to start functioning in human beings are the senses and it is through the perceptions of the senses that human beings become observers. Through repeated and prolonged perception, a process of refinement takes place through "an exercise of attention, of comparison, of judgement."[3]

4. I have come to believe that initial exposure to natural sounds and speech patterns is essential in the acquisition of listening and speaking skills, which determine a foreign language speaker's acceptance in the new language community. I have found that correct pronunciation and proper intonation and accent enhance the chances of understanding and being understood in a foreign language. The example of children learning their first language or even those learning to speak a language in a foreign language environment, can demonstrate that it is possible to acquire native fluency in a language with proper sounds and intonation by only listening and speaking before any exposure to the written language or grammatical

[2]Elizabeth Hainstock, The Essential Montessori (London: The New English Library, 1978), p. 113.

[3]Hainstock, p. 96.

exercises. It is possible for a second-language learner to be impregnated by the proper "spirit"[4] of the language with the help of correct sounds and intonation patterns which can gradually be refined and developed into the mastery of syntactical complexities.

5. Lastly, I believe that peer cooperation and self-correction are essential elements in learning and are of vital importance in a language situation. Through observation of one's own performance and the performance of others and also helping in one another's performances, learners will be able to develop inner criteria for recognizing their own mistakes and come out of their initial trepidation and sense of embarrassment.

I arrived at the above assumptions after a year of study and reflection at SIT, after producing the Sound-Color Fidel and the colored Spelling Charts, and after reflecting upon their utility. I think that the teaching of Bengali with these charts will enable a teacher to realize and implement the above assumptions of teaching and learning. I shall enumerate below how the colored charts can fulfill these assumptions.

Firstly, as the teacher's familiarity with the charts develops, he/she will be able to increasingly realize their potentialities and fulfill his/her role of subordinating teaching to learning. By pointing at the multiple sound-color associations, the teacher can activate the learners' interest in the learning activities and encourage them to be responsible for their own learning. Once the learners catch on to the spirit of the "game,"[5] it will be possible for the teacher to delegate the responsibility of self-education to the learners and stand back as a watchful and understanding

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[4]Caleb Gattegno, The Common Sense of Learning Foreign Languages (New York: Educational Solutions, 1976), p. 24.

[5]Gattegno, p. 24.

observer and guide.

Secondly, the charts will generate freedom and independence in the learners of a language. As the teacher points to the association between sounds and colors, shows how to produce phonemes and morphemes with the combination of vowel and consonant sounds, shows the way to the production of words and short sentences, and also associates the colored rectangles with the colored graphemes, the learners can become free of their dependence on the teacher and experiment with new morphemes and words by playing with the colored rectangles and graphemes, based on the knowledge gained from the process the teacher has taken them through.

Thirdly, the colored charts trigger visual and auditory impressions and thereby engage the physical, intellectual, and imaginative faculties to produce speech.

Fourthly, the S-C Fidel is a highly effective tool for the attainment of oral and listening skills through the visual and auditory association of color and sounds and the utterance of the sounds. Through a process of seeing, hearing, associating, and uttering, the learners will be provided with hearing, understanding, and speaking skills which are of vital importance in mastering a language.

Fifthly, the colored charts can also contribute a great deal to learning through peer cooperation and self-correction. Once the "rules"[6] of the game are observed and understood by the learners and they start enjoying the game, they may be able to overcome their timidity and self-consciousness by observing their peers go through similar processes of trial, error, and self-correction. It may also satisfy them to be able to contribute

[6]Gattegno, The Common Sense, p. 22.

to the learning of their peers by helping them and correcting their errors.
I think this activity is greatly facilitated by the fact that the charts
are not tools which are handed out individually to the learners, but are
kept hanging in front of the class to be decoded and utilized with one
another's cooperation.

Over and above all the above functions, the colored charts are likely
to fascinate and hold the attention of the learners as they may offer novel
and challenging experiences and possibilities, especially to those exposed
to them for the first time.

MY UNDERSTANDING OF THE SOUNDS AND SPELLINGS

OF BENGALI AND THEIR ARRANGEMENT ON THE FIDEL

AND CHARTS

While working on the Bengali Sound-Color Fidel and the colored Spelling

Charts, I examined my native language closely and analytically and discovered

generalities, peculiarities, and uniquenesses of the language of which I had

never been aware. I realized that while speaking one's native language is

a natural accomplishment, understanding and awareness of the same require a

conscious and deliberate effort. Bengali, like all other languages, has

undergone diverse influences from many other languages, regions, and

climates. It has also been molded by the natural human tendency to simplify

and shorten oral expressions. With the passage of time, the gap between

colloquial speech and the traditional written language has gradually

expanded.

In preparing the colored charts in Bengali, I came across certain

difficulties not only in representing the sounds in color but also in making

the colored Spelling Charts correspond exactly to the Sound-Color Fidel.

For the first time I became aware of how I had accepted all complications,

combinations, spellings, and reductions of Bengali graphemes without any

question. I also realized that, with all its complications, it is not an

especially difficult language to learn.

In the following pages I will explain my understanding and awareness of

the sounds, graphemes and spellings of spoken and written Bengali. It took

me more than two months of study, searching, reflection, and analysis to

arrive at the following phonetic/phonemic conclusions about the language and

to complete all the charts.

1. Bengali is a quasi-phonetic language, by which I mean that most of its characters represent uniformly single sounds. Thus the Bengali alphabet with its 53 letters represents 53 sounds, although the number of sounds do not exactly correspond to the graphemes represented in the traditional alphabet. Certain derivations, borrowings, or developments have been responsible for the inconsistencies in the phonemic reproduction of some graphemes as they are today. A few of them have more than one phonemic use; a few change their sounds when in use or in different combinations; still others serve only to add extra or emphatic sounds to the sounds to which they are added.

2. Out of these 53 letters, 12 represent 17 vowel sounds, of which 5 have single sounds. One letter (ঌ) has no sound or use in the spoken or written language and has, therefore, become obsolete in modern Bengali. The letter (এ) represents two phonemes. The initial vowel (আ) has two distinct and full phonemic sounds as well as two shortened and indistinct sounds. (ঋ) represents a combined phoneme of a consonant and a vowel sound, while the function of (ঁ) is simply to nasalize the sounds of vowels with or without the addition of consonants. Two vowel graphemes (ঐ , ঔ), both in their primary and secondary shapes (see below, no. 4), represent combinations of two different vowel sounds in each.

3. The shapes of all vowel graphemes have evolved from the initial grapheme (আ). The only exception is the letter (ঋ) which is the aforementioned combined vowel and consonant sound (see no. 2). The reason for including this grapheme in the vowel section does not seem clear except for the fact that it also has regular abbreviated or secondary graphemes like all other vowels, and can represent the sound of the grapheme when

attached to consonants in its secondary shapes. The initial vowel (অা) is
of great importance in Bengali phonology, because no consonant can be
pronounced alone without the inherent sound of this vowel, unless some
other vowel sound is added for the formation of a morphological or lexical
unit. Hence, the primary position assigned to this grapheme in the Bengali
alphabet seems well justified.

4. All vowels in Bengali, except the initial vowel (অা), have primary
as well as secondary graphemes, as in the case of Arabic and Hindi. The
primary graphemes are pronounced as separate phonemes, either as lexical
units by themselves or in combination with other phonemes. The secondary
graphemes, on the other hand, can only be added to consonants to which they
lend the sounds of the vowels they represent. In the case of the two
compound vowels (ঐ) and (ঔ), however, the sounds are sometimes split in
two parts, with their first sounds either inherently pronounced or pronounced
with their secondary graphemes and the second sounds are represented by the
primary graphemes of the vowels used. As the initial vowel does not contain
any secondary grapheme, it is either pronounced as an inherent sound in a
consonant or it is pronounced as a separate grapheme when written separately.

5. There is a systematic order in the arrangement of the consonantal
graphemes in the traditional alphabet. The primary consonantal graphemes
are arranged as follows:

a. All the consonants in the first 5 rows are arranged in rows of
5 graphemes only.

b. Each of the 5 rows contains related sounds based on their points
of articulation. Every first and third grapheme represent unaspirated voiced
sounds of the related groups and the second and fourth letters represent
aspirated sounds of the first and third letters in the rows respectively.

The fifth letter in each row has a nasal sound.

     c. The retroflex (**ড**) and the liquid/lateral (**ল**) are next to each other in the 6th row; the two palatal retroflexes (**ষ**) and (**ঠ**) are next to each other again in the 7th row; the 3 graphemes of / s /, / š /, and / žh / (**শ**, **ষ**, **স**) are also placed one after another.

     d. The 5 graphemes in the last row are never used in an initial position in a word nor do they ever receive any inherent vowel sound or secondary vowel graphemes in pronunciation.

     All the above patterns reveal that the Bengali graphemes were arranged, as far as possible, according to the similarity of their points of articulation or their position in morphemes.

     6. The shapes of almost all the consonants seem to have evolved from the 3 basic shapes of (**ক**), (**ম**), and (**ত**).

     7. When consonants are combined with other consonants their graphemes are either reduced to half their original size or half their original shape, or to even both. Such consonant clusters are never used in an initial position; they are used in a medial or final position, whereas the primary graphemes can be used in all positions. In the consonant clusters, the first consonant is pronounced without any vowel sound or stress. The second consonant of the cluster receives either the inherent vowel sound of the initial vowel (**অ**) or the sound of some other vowel whose secondary grapheme is attached to the cluster. Many consonants have more than one reduced secondary grapheme, depending on the consonants with which they are combined. The shapes of consonants combined in the clusters can sometimes be changed beyond recognition.

     8. When a consonant is pronounced without any vowel sound in a lexical unit, it is sometimes marked with the sign (**੍**) below it.

<u>An Analysis of the Scheme and Arrangement of the Colors in the Bengali</u>

<u>Sound-Color Fidel</u>

1. The Sound-Color Fidel represents all possible phonemes of modern colloquial Bengali, irrespective of the actual number of graphemes in the traditional alphabet. Thus, each colored rectangle represents a single phoneme whether it is represented by the graphemes of the traditional alphabet or not. The 52 colored rectangles on the Fidel are neither equivalent nor correspondent to the actual arrangement in the traditional alphabet.

2. The upper section of the Fidel, as in the S-C charts in other languages, represents vowel sounds and the lower section consonant sounds. There are 15 vowel sounds and 37 consonant sounds. This arrangement on the S-C Fidel signifies the importance of vowels in the formation of morphological and lexical components.

3. As in other S-C charts, single colors are arranged on the upper rows in both vowel and consonant sections. The single colors represent single sounds and double or triple colors represent diphthongs or compound sounds. As the single colors represent basic and more frequently used sounds, they have been assigned priority of position.

4. The 2 traditional single graphemes (ঐ and ঔ), which represent double sounds, have not been separately represented by 2 double-colored rectangles, because their sounds can be separately shown and combined by 2 single vowel sounds represented by 2 single and separate colors.

5. Unusual and borrowed sounds have been placed on the lower rows, i.e., the compound sound of (ক্ষ), the nasalizing symbol (ঁ) for the vowels, the sound of (ৎ) in the vowel section, and the borrowed sounds of

/wa/ and /va/ in the section of the consonants.

6. As in the case of the S-C chart in other languages, if a traditional grapheme has multiple sounds, it has been represented by as many colors as it has sounds.

7. Aspirated phonemes have been represented by pale colors.

8. The phonemes in Bengali which are similar to the phonemes in other languages have been represented in colors similar to those on other S-C charts to facilitate quicker recognition and production of those sounds by learners already familiar with the S-C chart in another language. This will, however, require these learners to recognize the association of a sound with a color rather than with the location of the color since the rectangles are in different positions.

9. Sounds which are peculiar only to Bengali have been added in different colors on the Bengali Fidel. Sounds having slight variations in the language have been marked with a black dot on the same color.

Analysis of the Scheme and Arrangement of the Colored Spelling Charts

1. The colored Spelling Charts are a group of phonic codes which include all the signs and spellings of written Bengali arranged in vertical columns corresponding to the Sound-Color Fidel.

2. The color scheme of the Spelling Charts varies slightly from that of the S-C Fidel in that there are 56 colored columns in the Spelling Charts as compared to 52 colored rectangles on the S-C Fidel. Of these, 18 columns are devoted to 42 vowel signs and 38 contain 128 consonantal graphemes. This is necessitated by the fact that certain single graphemes in the language represent compound sounds which can be indicated by combining more

than one color from the Fidel. But they need to be recognized and learned as single graphemes in the written language in order to be read and written correctly.

3. In the vowel section, 12 columns are in single colors and 6 in double colors. And in the consonant section, 26 are in single colors, 11 in double, and 1 in triple colors. As in the Fidel, 5 single and 3 double colors contain black dots, signifying variations in sound.

4. In both the Fidel and the Spelling Charts, attempts have been made to arrange the phonemes represented by the colors and the graphemes, as far as possible, according to the development of the graphemes from a few basic shapes. Thus the vowel section has been arranged following the development of the initial grapheme (অা). Similarly, consonants have followed the development of the 3 basic shapes of (ৰ), (ৰ), and (৬). This has been done to facilitate the easy mastery of the written alphabet, in pursuance of the principles of deletion, division, addition, and substitution explained by Dr. Gattegno in Words in Color Background and Principles.[7] According to him, all vowels in English can be developed from the basic shape of the initial grapheme (a). Thus, instead of arranging the English vowels as "a e i o u," he has arranged them in his book as "a u i e o."

5. The initial graphemes in all the colored columns on the Bengali Spelling Charts are primary graphemes and the subsequent ones are either secondary graphemes or the reductions for consonantal clusters. The positions of these graphemes in their respective columns indicate their positions when used to form morphemes. For example, if a grapheme has been placed on top of its little block, it is used in a top position when

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[7] Words in Color: Background and Principles (New York: Xerox Corporation, 1962), pp. 10-11.

combined with another grapheme, and vice versa.

6. Positions of the graphemes in their columns indicate their priority and frequency of use in the formation of morphemes and words.

7. Two pairs of similar sounds with insignificant differences in modern spoken Bengali represented by (2ȷ , ঊ) and (ং , ঙ) have been merged into two sounds represented by 2 rectangles. The first pair (2ȷ , ঌ), however, is in a double color and the other (ং , ঙ) in a single for the nasal sound.

8. The secondary grapheme of (্য) of the letter (2ȷ), which is a doubling agent for consonants besides being a vowel diphthong, has been included in both the vowel and consonant sections. Similarly, the primary and secondary graphemes of (ঽ) have also been included in both sections as it produces both vowel and consonant sounds in different combinations.

9. As (শ) produces both / s / and / š / sounds, it has been placed in the columns of both (শ) and (ষ).

10. The secondary graphemes of (ৰ) and (শ) sometimes double the sounds of the consonants they are attached to the bottom of and have, therefore, been included in the columns of the consonants they double.

11. Lastly, the initial vowel (অ), having 2 inherent sounds, has been represented in 2 colors in the 2 separate columns of (অ) and (ও).

MY IDEAS FOR TEACHING WITH THE BENGALI SOUND-COLOR FIDEL

AND COLORED SPELLING CHARTS

I produced the Sound-Color Fidel and the colored Spelling Charts in Bengali with the hope of facilitating the teaching of modern spoken and written Bengali to foreign learners, illiterate adults and children from illiterate backgrounds, as well as to children from educated backgrounds. To me the charts seem to offer tremendous possibilities for teaching Bengali to these learners as a partially self-educating process without constant guidance from the teacher. However, learners of Bengali would still encounter many difficulties in the way of mastering the language as anyone has to encounter in learning any language. The ways I envisage the S-C Fidel and the Spelling Charts serving the purpose of learning Bengali are as follows:

1. By having the sounds triggered by the colors and learning to produce the sounds with proper stress and intonation, the learners should be able to discern and understand the actual sounds of the spoken language and utter them correctly.

2. By observing various graphemes on the Spelling Charts in the same colors as on the S-C Fidel, the learners could recognize and relate the written symbols with their corresponding sounds. The variations of the graphemes in the same colored columns can enable learners to anticipate all possible variations of the spelling system.

3. By relating the graphemes to the sounds from the Spelling Charts, the learners should be able to progress with the reading and writing of the language.

In order for the Fidel and Charts to serve the learners effectively, the teacher has a tremendous task before him/her. He/she would be required to have competence in and awareness of the following skills:

    a.   the language to be taught

    b.   an understanding of the process of learning that is generally at work in learning a language

    c.   the goals and objectives to be achieved by the end of the program

    d.   the goals and objectives the learners have set for themselves

    e.   the details of the method he/she is going to employ

    f.   the steps he/she is going to follow all the way

    g.   a concept of his/her role as an encouraging, guiding, and understanding observer

    h.   a knowledge of when to play an active and when a restrained role, or when to withdraw into the background.

As the S-C Fidel and the Spelling Charts are specialized tools for teaching a language, a teacher needs to have a certain orientation in order to utilize them properly. Specifically, as his/her Bengali course progresses, the teacher will need to help learners to:

    a.   associate the colors with the sounds they represent

    b.   utter and distinguish individual vowel sounds and be aware of the importance of vowel sounds in a language

    c.   be familiar with stress and intonation patterns in Bengali

    d.   combine the initial vowel sound (আ) with some important consonant sounds and be aware of the dependence of the consonants on this vowel sound for utterance and formation of minimal morphemes

    e.   combine other vowel sounds with the consonants and produce morphemes and lexical units and be aware of the innumerable possibilities of

word formations with just a few vowel and consonant sounds

f. combine words into longer phrases and short sentences

g. transfer the knowledge of sound-color association to the colored

graphemes on the Spelling Charts

h. recognize the secondary vowel graphemes derived from the primary

ones and learn to add them to the consonant graphemes in order to

form written morphemes, syllables, and words.

By following the above steps the teacher can actively engage the will

and intelligence of the learners right from the beginning. Through

observation and reflection the learners should become aware of the immense

potentialities within and outside themselves as well as of their weaknesses

which can be improved by their own efforts and with peer cooperation. Their

natural inclinations should impel them to explore the mysteries of the

language like Alice in Wonderland. In this way learning a language can

provide extremely rewarding and fascinating experiences for a learner.

I tested the use of the Bengali S-C Fidel at the Educational Solutions

in New York on the multilingual teachers who are thoroughly familiar with

similar charts in their own or other languages. I realized how quick and

easy it was to teach such learners the sounds, morphemes, lexical units, and

sentences in Bengali by merely familiarizing them with the few sounds in

Bengali which were non-existent in English and their languages. This is the

reason colors representing similar sounds in other languages have been

retained in the same colors on the Bengali Fidel (see p. 14, no. 8).

However, such learners will be rare and will not be considered in this paper.

Nevertheless, it should be remembered that after learning Bengali with the

S-C Fidel and the Spelling Charts, the learners will be in a position to

learn other languages more quickly with similar charts if they are available.

For adult learners unfamiliar with the Fidel and the charts, it would be good for the teacher to hold an informal introductory session in a relaxed atmosphere. This would provide an opportunity for the teacher to explore the background, experience, needs, and expectations of the learners as well as enable him/her to express his/her own expectations and goals for the course and for the learners. This would also be an occasion for the teacher to explain the methods he/she is going to employ.

In general, the most effective way to start teaching is with the S-C Fidel, because the colored rectangles can allow the sound-color association with fewer distractions than the colored graphemes on the Spelling Charts. As we are aware of the importance of vowels in the formation of morphemes and as the gateway to faultless speech, the first sounds to be introduced from the Fidel should be the single and basic vowel sounds (e.g., অ, আ, ই, উ, এ, ও). They should be introduced one at a time and combined with some basic consonants (ব, ক, র, ম, থ, স, ন, প, ট, ত) to form morphemes and words. An example of how a teacher of Bengali can start her initial lessons with the Fidel is given below:

-- Introduce the initial vowel sound of অ / ɔ /.

-- Introduce the consonant sound of ক / k /.

-- Combine ক with অ , forming ক / kɔ /.

-- Introduce the sound of ম / m /.

-- Combine ক , অ , and ম to form কম /kɔm/.

-- Introduce র / r /.

-- Combine ক , অ , র to form কর /kɔr/.

-- Form করা /kɔrə/.

-- Form কমর /kɔmər/.

-- Change the combination to মকর /mɔkər/.

-- Reverse the combination to রকম /rɔkəm/.

-- Introduce the vowel sound of আ / a /.

-- Combine ক with আ and form কা /ka/.

-- Form কার /kar/.

-- Form মার /mar/.

-- Form কামার /kəmar/.

-- Form আম /am/.

-- Form আমার /əmar/.

-- Introduce the consonant sound of ন / n /.

-- Form নাম /nam/

-- Form the phrase আমার নাম /əmar nam/, meaning "my name."

-- Reverse the second word and form আমার মান /əmar man/, meaning "my pride."

-- Introduce the consonant sound of ত / t̪ /.[8]

-- Form তার /t̪ar/.

-- Form the phrase তার নাম /t̪ar nam/, meaning "his/her name."

-- Introduce the vowel sound of ও / o̪ /.[9]

-- Form ওর নাম /o̪r nam/.

-- Combine ত with ও to form তো /t̪o̪/.

-- Form তোমার /t̪o̪mar/.

-- Form the phrase তোমার নাম /t̪o̪mar nam/, meaning "your name."

-- Introduce the vowel sound of ই / i /.

-- Combine ক with ই and form কি / ki /.

[8] /t̪/ is used here to represent a voiced interdental stop sound.

[9] /o̪/ is used here to represent a sound like /ow/ without a glide.

-- Form question তোমার নাম কি ? /tɔmár nám ki/, meaning "What's your name?"

-- Form reply আমার নাম রিমা /əmár nám rima/, meaning "My name is Rima."

In this way a resourceful and imaginative teacher can direct and guide the learners to add, delete, change, substitute, and reverse the sound combinations, and play with them. The sign of stress (') has been used from the beginning of the lesson to incorporate the important aspects of stress and intonation in teaching a language. The teacher and students of Bengali can form many other words, phrases, and basic communicative sentences from these few sounds. The time needed for the above lesson would depend on the level, awareness, will, and cooperation of learners and the awareness and competence of the teacher. New consonants and vowels can be added in ones and twos as they become necessary to change words for new lexical units and structures. With the addition of more pronouns, verbs, and short syntactical units, the learners will gradually acquire basic listening and speaking competence. A list of a few more basic words and minimal syntactical units is provided below:

খাব /khábə/ 　　　　　　　　 কত দাম /kɔtə dám/[10]

আমি খাব /ámi khábə/ 　　　　 এটার দাম কত /ətár dám kɔtə/

খাও /kháə/ 　　　　　　　　　 এটা নাও /etə naə/

খাবার খাও /khəbár kháə/ 　　 এখন যাও /ækhən jaə/

এখানে /ékhānə/ 　　　　　　　 এখন যাব /ǽkən jabə/

এখানে বস /ekhə́ne eśə/ 　　　 কখন যাবে /kɔkhən jabe/

ওখানে বস /ọkhāne bɔ́śə/ 　　　 কখন খাবে /kɔkhən khábe/

এখন খাবার খাও /ǽkən khəbár kháə/

_____

[10]/d̪/ here represents a voiced alveolar stop sound.

কখন আসবে/kɔkhən ásbe/

কাল আসবে /kál ásbə/

কাল যাব /kál jábə/

তুমি কখন খাবে /tumi kɔkhən khábe/

আজ ভাত খাব /áj bhat khábə/

তুমি কথা বল /tumi kɔθə bɔlə/

আমি কথা বলব /ami kɔθə bɔlbə/

আমি কথা বলি /ami kɔθə bɔli/

তুমি কথা বলবে /tumi kɔθə bɔlbe/

At this point teachers can also introduce colored rods, pictures, or other materials to enlarge the scope of the class. (See comments for Bengali speakers on p. 26.)

As I have shown with the (') sign on the graphemes in the sample lesson on pp. 21-22, the stress and intonation of the language can be incorporated in the teaching right from the beginning. The teacher can sweep the pointer from one color to another slowly or fast, touch the rectangles softly or strongly, and/or join and separate fingers. He/she can also drop the pointer or stop it for punctuation.

Close attention on the part of the learners is essential at every stage and it is the constant responsibility of the teacher to make sure of where the learners are. If the learners feel comfortable in the situation and are willing to accept the challenge and responsibility offered to them, I believe attention and concentration will be forthcoming. The more attentive learners or learners whose reflexes are more prompt can be called upon to model performances. Sometimes calling upon the weaker and slower learners to tap and emit sounds may not only be helpful for them, but may also benefit the entire class through observation of repeated performances. This activity

would not only facilitate the learning process but would instill confidence in weaker as well as in stronger learners.

Once the learners feel fairly comfortable with the Fidel and can function with relative ease on their own and with one another's cooperation, the graphemes on the colored Spelling Charts should be introduced to them. I have experienced that the connection between the sounds and graphemes can be established immediately because colors on the Fidel and the Spelling Charts are identical. I have also observed that I can retain the location of the colors on the Fidel and the Charts in my mental association better than the colors and so I have tried to retain the order of the colored rectangles of the Fidel in the arrangement of the colored columns on the Spelling Charts.

In teaching the graphemes it would be helpful for the students to start with the more frequently used and less complicated shapes (e.g., অ, আ, ব, র, ক, ও, দ, ও etc.), and gradually build from there on the learners' awareness of the association between the colored rectangles and the colored graphemes. It would also be necessary to teach the secondary graphemes and show how to attach them to the primary ones at this stage. The shift from reading the colored graphemes to writing them can be initiated sometime during this process, depending on the learners' readiness to do so. In teaching writing, the teacher should direct the learners' attention to the few basic shapes of the vowels and consonants and point to the development of other graphemes from them based on the principles of deletion, substitution, addition, and inversion (see p. 22). In this way the responsibility for relating, assimilating, and learning, whether with decoding or encoding, can be delegated to the learners from the start.

In short, the success of the entire process depends on the span of

attention and continual awareness of both learners and teacher and also on the teacher's ability to call forth the resources and energy of the learners as and however required. If the teacher speaks the language of the learners, verbal feedback from the learners may help him/her to assess the level and progress of the learners in order to plan his/her next move. If the teacher does not speak the language of the learners or if it is a multilingual situation, he/she would have to resort to his/her powers of observation and intuitive capacity to sense where the learners are. The teacher may have to proceed slowly and cautiously in the beginning, introducing a little at a time, making sure at every step that everyone feels more or less comfortable with what has been accomplished. This will generate the desired atmosphere of harmony, trust, and freedom which is so essential for successful learning.

The lessons on pp. 20-23, though suitable for all groups of learners, would have to be varied slightly according to the needs of the groups to be taught. The above lessons would properly meet the requirements of the foreign learners of Bengali. However, for illiterate adults and children as well as for adults and children from non-standard dialect backgrounds, the main emphasis should be first on their acquisition of correct sounds from the S-C Fidel. The new association of visual and auditory senses would require them to become aware of which of their sounds are incorrect. Once they are comfortable with the new sounds, the teacher can focus attention on teaching them correct syntax. Being native speakers of Bengali, it would be easier for them to learn longer structures from the beginning than it would be for foreign learners. The graphemes can be introduced at this stage for these learners to visualize the shapes of their utterances as well as to learn reading and writing.

The task of the teacher should be easier in the case of children than

with adults. Children are usually attracted to bright and pleasant colors

and are always susceptible to playful and enjoyable activities. They are

prompt in imitating and acquiring unfamiliar sounds, responsive to

expressions of warmth and attention, and are usually anxious to please.

These facts enhance the possibility of the teacher's involving them in

absorbing activities with the colored charts. As for primary school

children who are already proficient in the standard spoken speech and

mainly need to learn the skills of reading and writing, less time, if any,

will need to be spent on correct utterance of sounds. After the preliminary

association of sounds and colors has been made from the Fidel, their attention

can be directed to the colored graphemes for speedy acquisition of reading

and writing.

In considering the learning process of foreign learners of Bengali and

that of native speakers, the main difference seems to be that whereas native

speakers may find everything they utter meaningful from the beginning, non-

native speakers would have to be satisfied initially with producing and

creating sounds for the sheer joy and love of the sounds of another human

speech, whether it makes sense to them or not. For native speakers of

Bengali who are handicapped in society by their non-standard speech and are

deprived of the privileges of a better living, correct speech and literacy

would remove one barrier of social disparity and possibly allow them to enjoy

the fruits of material progress. The purpose of teaching these learners

would be to rectify their regional inflections and provide them with

proficiency in reading and writing. To both native and non-native speakers

oral, reading, and writing skills should open "magic casements" on unknown

and "perilous seas."[11]

[11] John Keats, "Ode to a Nightingale."

Finally, I would like to mention that in the process of producing these
charts, reading, reflecting, writing, and correcting, I became relatively
independent of my guides and counselors and passionately worked my way to
the end with complete autonomy. I became completely absorbed and involved
in my curiosity and search for the secrets of teaching and learning with the
help of the charts. As I became responsible for my own intellectual search,
I felt compelled by a keen desire to learn as much as possible and be as
correct as possible. I passed through a continual process of error and self-
correction until I became satisfied that I had partially achieved what I was
looking for. With an increase in my knowledge, my awareness of the entire
process increased remarkably. I realized that similar states may be developed
in the learners in a language classroom by an understanding and knowledgeable
teacher who is able to free the learners of their total dependence and
inspire and direct them to take responsibility for their own learning and use
their intellectual and imaginative faculties as best as possible.

If the Sound-Color Fidel and the colored Spelling Charts can implement
and transform the learning of Bengali for foreign learners, illiterate adults
and children, and children in the regular schools into enjoyable, painless,
and self-directed activities, Yeats' idea of "blossoming labour" will be
successfully realized.

APPENDIX

Bengali Colored Spelling Charts

Colored
Spelling Charts

Husne Jahan Alam

MAT X

August, 1979

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