A review of (1) the Tutor-Student-System, (2) Initial Teaching Alphabet, (3) Words in Color, and (4) the Michigan Successive Discrimination Program (MSDP) is presented in this paper. (WR)
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Some Innovations in Teaching the
Decoding Aspects of Reading

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Just what is the question facing the Right-to-Read effort? Is the question one of best technique (?), and if so, for whom? Is the question how best to effect total functional literacy (?), and if so, by what definition of functional literacy? Or is the question the profound issue of how best to ensure everyone an equal opportunity to learn to read and write to the top of their individual potentials.

Contrary to what most people think, there are answers to all of these questions. But, as always, there are complicating social, political and economic issues preventing widespread acceptance.

Without dwelling on the complex philosophical-social issues surrounding the "Right-to-Read," this paper will address itself to the relatively simple question of, "What are some particularly 'innovative' approaches to the teaching of basic word decoding skills?" Innovative in this context does not necessarily mean that which is new and different, but rather that which is not popularly known. This is an important distinction because none of the strategies herein outlined are necessarily better than techniques currently in popular use. They might, however, be more appropriate—for congruent with—certain circumstances.

While the four strategies outlined below tend to emphasize the decoding—or word saying—aspects of reading, a major effort to improve reading skills must also include a language enrichment program, a program to improve thinking skills and one to build good study habits. These areas tend to be less provocative to
laymen but are no less important to real literacy—that is, the capability to read and mentally process at a level higher enough to derive "satisfaction" from reading and learning. This definition is necessary if we hope to have men continue to grow to yet higher levels with age and experience. Anything short of a system permitting positive increments with passing age is inadequate.

In reviewing the four innovative programs below it is important to keep in mind that they must be considered with respect to their appropriateness for specific situations and in lieu of specific goals. Wholesale adoption of new programs is rarely effective. New programming ideas often need to be adapted as well as adopted. Adapting, that is adopting and modifying, requires great sophistication. Often a minor modification of a particular idea or strategum will violate its integrity and render it useless: Penicillin pills in the mouth will likely have a beneficial influence in combating ear infection; the same pills in the ears might also combat the infection ... and the patient; more explicitly, professional assistance must be sought if innovative programming ideas are to be correctly adjusted to a new situation.
Innovative Programs in the Decoding Aspects of Reading

The four programs summarized herein represent different genre. First, there is the Tutor-Student System of John George--of our own state university in Kansas City. This program builds decoding skills out of the language of the children. Once more, George believes that everyone can learn to read if we once abandoned group instruction and go to one-to-one tutoring ... in the end, he maintains, it will prove to be more cost efficient. (I concur.)

Second is the ita or initial teaching alphabet. The ita was created in England by the grandson of the man who devised the Pitman short-hand system. Not really a teaching technique, ita attempts to deal with the problems inherent in an irregular sound-symbol system. A modified, or augmented, Roman alphabet is used to achieve this end. The student who learns to read with ita must then make a transition to the traditional alphabet system.

Third is Words in Color. An imaginative man, Caleb Cattegno, created an imaginative, perhaps even unique, program. Addressing itself essentially to the same problem as does ita--lack of consistent sound-symbol relationships--this program superimposes consistency by color coding sounds.

Unlike ita, Words in Color proposes a teaching strategy; and a quite comprehensive one at that.
Fourthly, there is the Michigan Successive Discrimination Program (MSDP). This program is the brain-child of Donald E. P. Smith, a behavioral psychologist. Smith and his chief associate, J. M. Kelingos, developed this program to be consistent with contemporary impressions of how we learn. The program puts decoding and all reading on a continuum with general language learning. For Smith and Kelingos, reading is a 'shaped' or conditioned behavior. The shaping follows a "programmed learning" theme, but in a format somewhat more palatable than typical "programmed" materials. The MSDP also offers suggestions for counter-conditioning poor (or maladaptive) behaviors with correct (or adaptive) behaviors. The overall program is designed to mold the student into a more efficient, independent learner. Its no-nonsense, scientific, behavioral approach to learning makes the MSDP a unique system, but one that is generally not very popular with language-experience and basal reader oriented elementary education people.

Elaboration of each of the above briefly summarized programs follows.

The Tutor-Student System

Perhaps the most recent innovation in the teaching of reading is the Tutor-Student System devised by John E. George, which appeared in 1971. This program is designed so that anyone who knows how to read (teachers, parents, older children, volunteer tutors, etc.) can teach a non-reader or very poor reader to read. As such, the program is designed for strictly one-to-one instruction. George has said that for too long we have incorrectly inferred that children possess the same learning rate, that children respond equally
to social and physical environments, that children can be interested in the same reading material at the same time, and that children are capable of responding to a teacher's directives in unison. This program fills a need for a program sensitive to the learning needs of individual children. In each situation the program provides a proper and sufficient focus on and attention to more of the variables which contribute to successful beginning reading. For example, the materials include a "Needs Check List." Before learning can take place, these needs ought to be satisfied. The check list presents these needs in order of their importance and gives examples of things to say and do to satisfy 1) Physical needs, 2) Safety needs, 3) Worth needs, 4) Belonging needs, and 5) Self-development needs.

The total Tutor-Student System consists of a training program with (1) a Trainer Guidebook, (2) Tutor Guidebooks, and (3) an audio-visual presentation. The nine hour Tutor-Student System training program is designed so that a trainer can guide a large group of tutors step-by-step through their Action Lists until they are perfectly able to do and say what is necessary to teach beginning reading. A tutor Guidebook containing Action Lists and other helpful directions is used by each tutor during the training program. For experienced teachers, or those who read very well and can follow detailed instructions the tutor training program is not required. The materials are sufficiently clear and concise to that for the good reader, training, although helpful, is not mandatory.
The materials include *Sounds in Words-Phonics*, a tutor and student two-book set for teaching sound-letter relationships (Phonics); *Reading Words*, a tutor and student two-book set for teaching spelling, letter recognition, and the reading of words; and *Reading Sentences*, a tutor and student two-book set that takes the student from reading single words to reading and writing sentences and stories of his own. If the tutor can do what the Tutor-Student System Checklist or Action List says to do, and say what it says to say, he can teach virtually anyone to read starting with the first day of instruction.

Now this system may appear to be quite restrictive and narrow in so far as the materials present detailed do and say instructions to the tutor. Rather than viewing this as restrictions upon the tutor, these instructions must be accepted as insurance that all of the important considerations involving the learning process are met during the course of instruction. Close adherence to the program materials will insure that each requirement for efficient learning is met. This prevents the tutor from spending too much time with less important aspects of the process while neglecting other more important aspects. Furthermore, this aspect of the program provides a smoothing effect as far as the teacher variable is concerned: The less experienced tutor can be equally as effective as the most experienced, a most significant consideration.

Whereas the materials do provide a relatively structured situation for the tutor, no such restriction is placed on the student.
The tutor uses the free responses of the student, thus permitting the student's unique experiences and language patterns to make the lessons truly individualized. Thus the advantages of the Analytical Phonics Approach and the Language Experience Approach are combined: Within a relatively structured situation the students' individual interests are given full opportunity for expression.

In summary, the Tutor-Student system can be described as: (A) Spreadable - it can be mastered by tutors in less than nine hours, (B) Personal - it is based on the student's own experience, grammar, and speech, (C) Painless -- there is no difficult memorization or complex phonics rules necessary. The student experiences only success in reading -- no failure, (D) Positive - starting with the first lesson the student recognizes sounds in words and is able to read both words and sentences. (E) Simple - each lesson consists of three basic parts, 1. reading sentences, 2. reading words, and 3. sounds in words (phonics). Optional lessons (primarily for pre-k to grade 1) include: Building Concepts and Reading to the Child. Furthermore, the use of Action Lists on satisfying needs and built in reinforcements found in all other action lists boost the esteem of the student and enables him to enjoy an optimum level of learning in each lesson. The highly motivated state at which the student arrives in each lesson should have a positive carry-over to other aspects of the student's life.

The Initial Teaching Alphabet (i/t/a)

Phonetic languages are defined as those in which each sign has only one sound and is represented by only one sign. There are, in fact, very
few languages that can be called phonetic according to this definition, but a number approach this idea: Spanish, Russian, German, and Italian among them. English is clearly not phonetic.

It is a fact that people learn to read and write in all written languages, however complicated these are, and however badly taught. The skill of reading and writing does not present insurmountable obstacles to all would-be readers. But it seems harder for those who have a non-phonetic language to make sure of correct spelling or of how to relate their knowledge of the signs for words to the skill of reading and writing. English is particularly difficult. Knowledge of etymology and grammar may help, but the ability to look at words and recognize their sound equivalents would seem to be of far greater value.

The question is: Can a non-phonetic language such as English be taught as a phonetic language? If an artifact could be found which would make non-phonetic languages resemble phonetic languages, then it seems safe to assume that a great step forward would be achieved toward reducing problems in learning to read the non-phonetic language.

The Initial Teaching Alphabet (i.t.a.), devised by Pitman, represents an innovation (Ca. 1961) which attempts to reduce the problems involved in learning to read a non-phonetic language.

First, it must be clearly understood that i.t.a. is not a method of instruction, as is, for example, the language experience approach. A teacher using i.t.a. materials has complete freedom to use any single preferred method or an eclectic method of choice, since i.t.a. is merely an alphabet, as the title indicates.
The traditional alphabet has, of course, 26 letters; from which Pitman selected 24 - all except of and X - and added 20 new characters to make an augmented alphabet of 44 characters. Each character is intended to symbolize a single sound, or phoneme. Since all i.t.a. characters are in lower case, where traditional English usage requires a capital letter, the i.t.a. lower case character is enlarged. Thus there are only 44 characters to learn in i.t.a. for reading and spelling purposes, whereas there are at least 52, and probably 70 or more to learn in the traditional alphabet system.

The English Language has some forty-odd sounds. The i.t.a. system symbolizes all of these, with some duplications (as c and k) to total 44 characters. This system seems clearly more efficient that words printed in traditional orthography (t.o.), since there are something like 2,200 ways to symbolize the forty-odd sounds of the English language. For example, consider how the sound of long i is symbolized by a letter or group of letters in words like aisle, height, geyser, eye, child, file, indict, lie, sign, choir, guide, by, and style. The long i sound in i.t.a. is symbolized by a single character.

If problems in reading can be attributed to a general Cognitive Confusion resulting from the lack of correspondence between sound and symbol, then i.t.a. prevents such confusion in three ways; 1) Because i.t.a. has fewer alternative printed symbols for the same word, or phoneme, the frequency of regular symbol-sound relations is greatly increased in a variety of contexts, 2) Because i.t.a. does away with multiple-letter symbols for single sounds, the "sound structure" of a word is made obvious.
The number of characters tells the reader the number of sounds in the
word, and the abolition of gross irregularity by i.t.a. removes false
clues which conceal the structure in t.o.

These factors are highly important to facilitating the discovery
approach in learning to read. Unlike the "Linguistic" approaches on
synthetic phonics methods, these advantages can be gained by using the
natural real-life language of the reader.

An extensive evaluation of i.t.a. was accomplished by Downing in
1967. The greatest benefit of i.t.a. was found in the first and second
year of school. In parallel tests, it was found that i.t.a. pupil's
word recognition and accuracy scores were at least double those of the
t.o. pupils by the middle of the second year. The i.t.a. pupils were
also significantly superior in rate and comprehension in reading.
Children's free written compositions were also much superior in the i.t.a
classes. Compositions were written 50% longer and used 45% more words
different from those used by children in t.o. classes.

At the stage of transition to t.o. the test results showed a plateau
effect in the i.t.a. pupils as measured by t.o. reading scores. Teachers,
however, maintained that transition was not an important problem. After
transition, by the end of the third year, i.t.a. pupils had a t.o. reading
age approximately five months in advance of children who had begun with
and used only t.o. In t.o. spelling, the i.t.a. pupils were equal to t.o.
pupils by mid-third year and significantly superior by mid-fourth year.
The superiority of written compositions was maintained beyond the transi-
tion stage.
Despite the fact that teachers reported that transition to t.o was not an important problem, the major criticisms of i.t.a. programs have identified this as a problem area. Specifically, Objective test results show that the i.t.a. students t.o. attainments are generally inferior to their i.t.a. attainments. The set-back at the transition stage is an indication that there may be important differences in the process of decoding the two orthographies. At least we have an indication that t.o. may present serious problems to the beginning reader that i.t.a. does not, at least in the early years. This must be viewed as a plus factor for i.t.a. because it fosters early success in reading.

The results summarized above represent the early findings of Downing and his England based study teamed. More recent U.S.A. studies are not quite as encouraging. The i.t.a. was supported, however, as a viable plan.

**Words in Color**

In 1962, Cattegno proposed a method for beginning instruction in reading which was also designed to overcome the difficulty involved in learning to read and write a non-phonetic language. The new approach, called Words in Color, is a formal method of instruction, involving a well defined sequence of techniques. Thus it is a more comprehensive program that i.t.a., which is nothing more than an augmented alphabet which can be used with a preferred method of teaching. Cattegno, then, has attempted to devise a procedure whereby written English could be transformed into as close correspondence with spoken English as possible.
The unique feature of this technique, however, is that he has attempted to leave intact the t.o. and the deeply rooted reading and writing habits and traditions of the English language. In order to achieve this correspondence between t.o. symbols and sounds, Cattegno uses different colors to represent the sounds of the language. Thus any combination of symbols, however different, which have a similar sound, are printed in the same distinctive color. Color, then, becomes a mediator between sound and symbol, establishing phonetic regularity to a non-phonetic, irregular, orthography.

Color is used only to introduce new sounds, word elements and words. The writing by the students and the materials used for reading do not make use of color. Once the student has been introduced to words, through colored charts, etc., standard printing is used for skill development and maintenance.

But color is used only as an aid which might help some pupils in learning to read and write, however, it might handicap others. Therefore, Cattegno has added a further dimension to the program which ensures that the responsibility for learning rests on the learner himself. This dimension is called the Dynamic approach, and is the basis for the remainder of the program.

The sequence of teaching procedures for the method is:

a) Children are introduced by use of the chalkboard to the five colored vowels a, e, i, o, and u. Chart 1 provides a set of ready-made "words" composed of these vowels. The first pages of Book 1 provide similar experiences without the colors. Pupils write these "words" in
their own books. Other "words" consisting of various combinations of vowels are then dictated by the teacher. Finally, each child invents his own "words" containing only vowels from his worksheet.

b) The teacher then introduces p and t, which permits the use of visual dictation to form a number of words, which appear on Chart 2 and in Book 1.

c) Then the two s sounds are introduced (as in us and is). Now sentences can be formed with the words which can be generated from the five vowels and three consonants (four different consonant signs). From this point on, the books will provide only a limited number of possible combinations, leaving to the student the discovery of additional combinations to be recorded on worksheets. Each time a new word is formed, or learned, the student can record it in a log or vocabulary book.

d) From this point on the teacher assumes responsibility for work as needed. The method consists of: 1) Work in class, with the charts containing examples of the words in color, by means of which the teacher guides student practice of certain sounds, 2) Individual work by each pupil in his visual dictation pad that accompanies his worksheets, 3) work on the Charts, 4) Use of the books and visual dictation in class to reinforce the learning of words.

e) As the students develop skills with words and sentences, stories are introduced. As more and more words are learned, the stories become more complex, and the students can begin to use their own words to form sentences and stories.
Cattagno's Words in Color program has been widely talked about and experimented with. It has been used throughout the country in programs under the anti-poverty and manpower development acts. Many experienced teachers are enthusiastic about this approach: it seems to them to be based on what they have always thought to be important - rapid recognition of whole configurations is compatible with a simultaneous phonic.

Because of the de-emphasis of rate memorization and drill, special education classes made up of slow or immature learners often have outstanding success. Teachers report that enthusiasm on the part of some students is often unquenchable. Furthermore, one might expect that as learners participate, they should either avoid problems or correct the problems they already have. This aspect, alone, has profound implications for the teaching of reading. Words in Color seems to be a significant approach; one deserving your consideration.

**Michigan Successive Discrimination Language Program**

The Michigan Successive Discrimination Language Program developed by D.E.P. Smith and J.M. Kelingos (1965), represents one of the best of a type of Reading program commonly referred to as *Programmed Instruction*. This type of program presents a tightly controlled progression through the development of basic and advanced skills necessary for successful reading behavior. A key feature of this kind of program is that each skill is presented at an appropriate time so that the learning process is made
orderly. There is not confusion as to what the student should be doing at any given time, for the student works through the program at his own pace—thus, those with higher levels of ability are not bogged down by a slower learner, and the student requiring more exposure to certain skills has ample time to acquire the necessary skills before moving along to a higher level skill. A second key feature of the program is that each element to be learned is broken down into small steps easy enough for the slowest learner to handle with ease.

With respect to the Michigan program, specific characteristics have been identified:

1) Discovery. Each frame presents a model. Below that there appear one correct form and one incorrect form. There is only one difference between the right and the wrong choice. To answer the item, the student must discover the point of difference—hence, the discrimination. Arrangement of the page to allow discovery to occur is one characteristic of the program. Discovery is held to be intrinsically motivating.

2) Complexity. In an English program, early frames might be involved with the teaching of basic discriminations. Later ones would teach word form or configuration. The configuration is learned by discovery of the points of dissimilarity with words that are easily confused. At still higher levels, phrases and sentences might be handled similarly, but with the important difference appearing in meaning. A second characteristic of the Michigan program, then, is its gradual increase in complexity.

3) Independence. All of the examples in the program require visual discrimination. At lower levels the student need only look in order to discover. At higher levels he must look and say, but the task remains
similar. Thus, a simple, token response, as circling the correct choice, is all that's required. There are no complex directions to slow down the learner; he is able to move at his own pace without regard to the progress of others. If for any reason (illness, absence, etc.) he is unable to work, the program waits for his attention. He is able to do the program all by himself. Thus, the program fosters independent learning.

The purpose of the program is to teach reading, writing, and listening to English speaking children or adults. There are three kinds of discriminations involved: Spatial, letter and word forms, and sound. During the first week or two, these skills are developed in separate books. Within the second book of each series the student begins to combine higher level skills, e.g., letters on space (manuscript writing), letter groups, and sounds in time (sentences). Books 3-8 complete the basal program: a sight vocabulary of 349 words providing a complete course in phonemic analysis. Books 9, 10, and 11 prepare the student for independent, analytic reading. In the meantime, spelling words are programmed to proceed their appearance in books 9, 10 and 11.

Classroom management of the program, while different from most other approaches to the teaching of reading, presents no real problem for the teacher. The tasks in the program are so carefully graded that failure can generally be traced to conditions outside the program. Examples of such conditions might be distractibility, fearfulness, and fatigue. Distractibility can be reduced by a) arranging two or more isolated spots in the room for use by distractible children; b) eliminating
unnecessary movement in the room; c) placing students as far apart as possible; and d) keeping walls free of decoration at eye level. Fearfulness can be reduced by placing the student near the teacher's desk, or, if the case applies, trying a seat in the back of the room. Also, keeping the fearful child away from fast moving children who provide competition and thus perhaps threaten the child also reduce fearfulness. In any event, the high success rate and built in reinforcements the program provides will soon overcome the child's fears. Fatigue, generated by the mechanics of the program, or from outside sources can be minimized by making it easy for the child to move from one task to another.

If a child completes a large section of a book unsuccessfully (the originator's criterion being 30 or more pages with about 20% of the responses incorrect) he has failed to make many necessary discriminations. After the environment has been altered to correct the problem, the material should be started over.

Since one of the characteristics of the Michigan program is that it fosters independent learning, the teacher is freed from the usual teaching tasks to devote attention to management of the program. All materials are self-explanatory, thus the teacher does not respond to questions, hand waving or other requests for help. To not respond requires the teacher to determine exactly what she was doing - and to carry on as though the question or hand raising had not occurred. Instances in which the child can't do the program are extremely rare. Indeed, the child who can't do the program will probably be found only in special problem classrooms (e.g., EMR's). For such children, special programs are currently being developed. Responses to demands for help where help is not required is a
hinderance to the development of independent learning for that child (e.g. results in learning wrong kinds of responses in various situations) and further, may be a disruption for other students in the room.

While no response is made to request for help, intervention is required if behavior is disruptive. The teacher intervenes only when the actions of a child make it impossible for the others to concentrate on their work (crisis situation). A crisis situation is defined as one requiring the teacher to intervene immediately. Any action taken in a crisis situation is strictly non-punitive, and is always followed by a plan to prevent the crisis from occurring again. Thus, the most effective kind of intervention is aimed at changing the environment in order to change the child.

Implementation of the program does not preclude normal teacher-child relationships. The children depend on the teacher to enforce the room rules which apply to all children, particularly while the program is in operation. Consistent enforcement is comforting to the children. Normal interactions occur whenever the children are not involved with the program.

Of the many questions about the program that are typically raised, one of the most frequent is: How do I know that the children are making progress? Correct responses are, in themselves, signs of progress. There are, of course, others:

Auditory Program: increased clarity of speech; reduction of need for repeating directions; and increased use of adjectives and adverbs in spontaneous speech.

Space Program: increased detail in drawings; correct size and space relationships.
Reading Program: ability to read the summary page after each unit.

General Behavioral Changes: reduction in negative behaviors - aggression, withdrawal, seductiveness; increased independence; increased awareness of environment. Evaluation by these criteria have the added attractive feature of being completely independent of the program itself.