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A THEORY OF LEARNING TO READ BY "MODALITY BLOCKING" OR  
"NON-VISUAL" ATK.

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A THEORY OF TEACHING SEVERELY HANDICAPPED READERS TO  
READ BY MODALITY BLOCKING OR NONVISUAL ATK, THE  
AUDITORY-KINESTHETIC-TACTILE METHOD, RATHER THAN BY  
STRENGTHENING ALL SENSORY MODALITIES IS REPORTED. INDIVIDUALS  
WHO SPEAK ADEQUATELY BUT WHO READ INADEQUATELY SUFFER  
INTERFERENCE FROM THE VISUAL INPUT SYSTEM IN THE LEARNING OF  
READING. IF THE INDIVIDUAL IS TO LEARN TO READ, VISUAL INPUT  
MUST BE BLOCKED. THE NONVISUAL ATK METHOD BLOCKS THE  
CONFLICTING MODALITY WITH CONSTRUCTIVE RESULTS AT STRATEGIC  
STAGES IN THE LEARNING PROCESS. USUALLY, THE CHILD IS  
BLINDFOLDED OR CLOSES HIS EYES, AND THE WORD TO BE LEARNED IS  
TRACED ON HIS BACK. AS THE TEACHER TRACES THE WORD, SHE  
SPELLS IT ALOUD. OFTEN, AFTER TWO OR THREE TRACINGS, THE  
CHILD CAN IDENTIFY THE LETTERS BEING TRACED, AND HE SPEELS  
OUT THE WORD. IN GENERAL, ONCE A WORD HAS BEEN MASTERED BY  
THE NONVISUAL METHOD, IT SEEMS TO BE HANDLED BY THE CHILD  
WITH COMPLETE NORMALCY. A LEARNING FACTOR SEEMS TO MATURE,  
AND WORD RECOGNITION, SPELLING, AND READING COMPREHENSION  
IMPROVE AT A CONSIDERABLY FASTER RATE THAN WOULD BE EXPECTED  
FROM THE LIMITED NUMBER OF WORDS TAUGHT. A PARAPROFESSIONAL  
AIDE COULD HELP CHILDREN USING THIS METHOD. REFERENCES ARE  
PROVIDED. THIS PAPER WAS PRESENTED AT THE ASSOCIATION FOR  
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A THEORY OF LEARNING TO READ

BY "MODALITY BLOCKING" OR "NON-VISUAL" AKT

Customarily, the approved and almost universally recommended technique for dealing with the problems of the severely handicapped reader is the careful and consistent use of all sensory modalities, with special attention given to strengthening the visual modality, commonly acknowledged to be, most often, the weak link. This multi-sensory approach, as you know, is termed VAKT or the Visual-Auditory-Kinesthetic-Tactile method. This paper reports on a possible alternative in which the visual modality is deliberately suppressed or blocked, initially at least, instead of being reinforced. The basic theory involved is that, in some cases, learning and especially learning to read, may be literally cut off or short-circuited by the visual modality rather than merely obstructed.

One of the most frequently expressed attitudes toward non-readers may be summed up as follows: he can say the words; why can't he read them?

It appears conceivable that individuals who have learned to speak relatively adequately but who have not learned to read adequately, have achieved one and not the other, because there was interference from the visual modality or input system in the learning of reading.

The necessary corollary is that visual input, rather than requiring reinforcement, must be blocked off. Certain students must literally be blindfolded, at certain stages in the remediation process if they are to learn to read. As

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indicated, this is quite opposed to most current theoretical formulations and most suggested remediation also.

Children with learning disorders, including reading, Bateman points out, have probably been given as many special names as has any type of exceptional child: specific language disability, brain-injured, perceptually handicapped, dyslexic, neurologically involved, educationally retarded, word blind, strepho-symbolic, hyperkinetic, aphasic, dysgraphic, interjacent, and so forth. But, most, if not all, of these diagnostic appellations fall short with respect to one criterion, substantial differentiation in treatment. In almost every case, whatever the theoretical beginning, whatever name is used to describe the difficulty, the end point tends to be what may be called the doctrine of combined modalities, or, as indicated, a form of VAKT.

A key aspect of this method, which you probably also know as the Fernald-Keller method, is presented as follows: "During Stage 1, the child makes use of several aids to learning. First, the word has meaning...Second, the child sees the word written by the teacher, he sees it as he traces, he sees it as he writes, and he sees it in final typed form...When all modalities of learning are used, the child should learn."

This paper would suggest that in any group which is characterized as recognizing very few words at sight, many, if not most, of those who learn by this method, VAKT, do so despite the emphasis on the visual modality and not because of it, and then only because of their own and their teacher's persistence.

In an article on psychoneurological disturbances, Myklebust, makes the point that the "psychoneurosensory" systems can and sometimes do function "semi-independently," so that children "with minimal brain damage" are reported

to have serious difficulties "when the learning task entails interrelated functions, such as both auditory and visual learning... These children may learn what the letters look like but find it exceedingly difficult to learn what they sound like, or the opposite. When presented with one aspect of the word, the visual, they cannot normally convert it to the auditory... Apparently, when two or more types of information are delivered to the brain simultaneously, a breakdown in neurological processes occurs. The clinical manifestations are confusion, poor recall, random movement, disturbed attention, and occasionally even seizures."

It appears possible, therefore, that to avoid such difficulties, and not only in the minimally handicapped, the conflicting modality could be blocked off with constructive results at strategic stages in the learning process. Such is the purpose of this proposed Non-VISUAL AKT method. The visual modality was identified as the critical one because, in all the cases involved, speech had developed perhaps slowly, but in reasonably acceptable fashion, suggesting that the auditory input system was working properly.

Non-VISUAL AKT differs from VAKT in several ways, and variations of Non-V AKT are possible too. Primarily, however, the child is blindfolded or closes his eyes, and the word to be learned is traced on his back. As the teacher traces the word, she spells it aloud, letter by letter. Often, the second or third time around, the student can identify the letters being traced and he, too, spells out the word. Sometimes, unless it constitutes overloading (or until the student becomes too advanced for this), three-dimensional letters, arranged to spell out the word, are placed before the student and, still blindfolded, he traces these with his fingertips as he feels the letters being traced on his back. The letters are then scrambled,

and again still blindfolded, the student arranges them in the proper sequence. The blindfold is then removed, the student sees what he has done (often his first experience with coherent sequencing) and writes the word on paper, or at the board, and then on a file card for future review.

Inasmuch as the student can often learn by this method to spell words a few years above his reading level, words to be learned may be selected from his class spelling list, offering an opportunity for quick success in at least one academic area. Words excerpted from the child's own dictated story, from an old test, from current reading material, or according to a carefully structured phonic sequence may also be used.

In general, once a word has been mastered by the "Non-V" method, it seems to be handled by the student with complete normalcy. Also, a learning factor seems to mature or to be matured and word recognition, spelling, and reading comprehension improve at a considerably faster rate than would be expected from the limited number of words taught.

It is interesting to note that subsequent to its independent development by the authors, a similar technique was reported from England. Called "haptic training", it was being used to teach geometric forms, but not words (Tansley, 1967).

Parenthetically, it should be noted that Non-V AKT does not seem to require the teacher's personal attention. A paraprofessional aide seems to do very well. It may also be possible to send it home for use there, not only to speed up learning, but also to restore something like the normal parent-child helping relationship which is usually non-existent or badly distorted in these cases.

The clinical experience involved is suggested briefly by the following

case histories of three youngsters and an adult--the adult a man of forty who, in a little less than a year has moved from a third grade reading level to a level of so-called "normal" adult competency, that is, about a 7th grade reading level.

Of the youngsters, Jay, now 10½ and a fifth grader, reads many more books than are required by classroom assignment, mostly on a mid-fourth-grade level, and occasionally scores 100 percent on classroom spelling lists of 20 to 25 words, sometimes quite without outside help. Before we started Non-V AKT with him a year ago, when he was in the fourth grade, he was barely a low second grade reader and a total non-speller. He had been a premature child and had many of the problems we associate with learning disability children--severe visual perceptual problems, some motor problems, auditory and speech problems, confusion about right and left, hyperactivity, and so on. The change in his learning pattern seemed literally to come midway through a spelling test. On it he spelled correctly the words we had had time to teach him via AKT--and in his characteristically confused way he spelled the five he had learned by standard classroom techniques. (instead - insahtam; mountain - mong; straight - sonsw; president - prought. He had learned "ought", his first AKT word, just the previous week.)

Ellen, now repeating third grade, is reading on a third grade level. Diagnosed as minimally brain-damaged two years ago, she was a totally disorganized youngster. She was a non-reader, completely lost in math, a non-speller, with some motor incoordination and serious difficulties with spatial relations, left-right discrimination, visual memory, and so forth.

Motor training, training with some of the Frostig materials, the

therapeutic aspect of the 1-1 relationship and for a brief period, medication, had helped her, but the first genuine breakthrough came last spring when this frustrated, angry but unusually lovely looking child consented once again to try something new, this time AKT, and with it was able to learn rather difficult words such as imagination, universe, earth, sky, occasional, beautiful, burthday, and, one day when she was very angry with her mother and sister, execution.

While sometimes measurable improvement is not always immediate, children's own insights and comments are often revealing. One such comment was that of a bright, verbal 12-year-old, diagnosed minimal brain-injured, who after just six or seven sessions remarked that he is able to visualize better and remember better both for spelling and word recognition the quite difficult words he learns via AKT, and that reading is in every way an easier and more comfortable process for him.

Work with brain-injured children has very clearly demonstrated (Cruickshank, et. al., 1961) the value of environments in which auditory and visual stimuli are much modified. In view of all of the foregoing, it is conceivable that a still greater degree of differentiation, and success, may be possible.

In any case, it is a speculative but persuasive thought that there may be a number of children, especially in the early grades, classified as reluctant or non-learners, who really suffer from a kind of modality conflict and for whom instruction centering around modality blocking may be required prior to or at least simultaneous with any other program for the amelioration of their difficulties.

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