

A CASE OF READING DISABILITY DUE TO DEFICIENT VISUAL IMAGERY

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A case of reading disability is certainly not an unusual clinical problem, but the remedial treatment which proved successful in Arthur's case seems worthy of description in that it illustrates the futility of attempting to teach all children to read by one method. The psychology of individual differences includes in its literature many instances of special disabilities found in children who possess to a normal degree all those abilities required for school progress but one or two isolated types. These children form so small a percentage of the total grade population that it does not seem necessary for practical purposes to adjust the methods which seem to work out for most children to suit the minority. In reading, for instance, it appears that the attitude toward such cases has been this: a number of children who seem bright in almost every other way have difficulty in learning the fundamentals, yet when they repeat the first grade their difficulties seem to iron themselves out, and from this point on they make normal progress. If the child is unable to learn to read after a year in the first grade, why not have him repeat? Reading is the most important thing taught in the first grade and it is imperative for further progress in other subjects. It is unfortunate that the child should lose a year, but it is far better that he do so in the first grade and better guarantee normal promotion later, than to be promoted into a grade the work of which obviously he cannot do, and probably be forced to remain there, where the subject in which he needs most drill is not stressed. Certainly such a plan cannot be considered unfair to the child.

The mother of the boy whom we shall here describe, Arthur, had been informed that her son in all probability could not be promoted from the first grade in the coming June. Entering school as he had in September, the boy's work during the 1A term had evidently been satisfactory, for he was placed in the high or 1B grade in February. His reports throughout the year indicated that his conduct had been excellent, and that his work had been of passing quality, which the mother described as "fair." Learning that, in

spite of this evidence, he probably would not be placed in the second grade in June, the mother quite naturally became alarmed, and brought him to us for advice.

Arthur was examined in May by Dr. Miles Murphy. We learned little of significance from the medical history of the case. The ages for walking, talking and becoming clean were not at all unusual. Arthur had suffered from measles, whooping cough and chicken pox, had had tonsils and adenoids removed, and had been victim of no serious accidents which might have contributed to the problem. Normal for boys of his age in height and weight, and in fine health at the time he was examined, there was little to suspect of definite physical etiology.

On the psychological tests the boy did well. Compared with boys of his age he was superior to ninety per cent on both the Witmer formboard and the Witmer cylinders, and he gave a good qualitative performance on the Dearborn formboard, though quantitatively he rates inferior to eighty per cent of ten year old boys. The second and third trials on this test were evidence of definite ability to improve. With the Stanford Revision of the Binet-Simon Scale the boy, then aged six years and ten months, obtained a mental age of seven years and nine months, receiving an Intelligence Quotient of 113. His memory span was five forward, both visual and auditory, and three reverse.

Conclusions based on the history of the case and upon the results of the tests as mentioned above indicated that Arthur was of normal mentality, at about the eightieth percentile of boys his age in general competency. It was in the field of school proficiency that Arthur fell down. He could do the work of the first grade in arithmetic reasonably well, but he was unable to read anything. He could not recognize printed letters, and could not, therefore, spell. He could, however, write a few letters: *h*, *e*, *d*, *o*, and *c*, but he reproduced only the *c* and *e* when asked for the specific letters. The *h* was for T, the *d* was for A, and *o* was for B. In the light of what he had accomplished as the result of a year in the first grade, the school was perfectly justified in considering Arthur unworthy of promotion. On the basis of the boy's general competency to do school work, however, it was felt that he should certainly be able to do second grade work if his deficiency in reading and spelling were removed. This deficiency merited further study, and it required special teaching. If Arthur could receive this simultaneously with his regular school work, he would thus save a year at school, and be

saved the stigma of a "left-back," which designation he in no way deserved except for the fact that he had not done as well in his reading as had most of the children in his grade. The recommendation was made to the school that Arthur be promoted to the second grade, but that he attend the Psychological Clinic regularly for teaching in the fall.

In October Arthur reported for clinic teaching—a boy in the second grade who was not only entirely unable to read words but could not even name letters. He was taught by Miss Libby Stone over a period of about thirteen weeks, and received in all twenty-three hours of teaching.

Naturally the boy's educational predicament came immediately to the attention of his teacher. She early recognized that he had very poor visual imagery and that although auditory presentations of material were less difficult of perception, the association had not been built up sufficiently for him to use this auditory ability in learning to recognize printed and written symbols. She noticed, also, that he whispered to himself and moved his lips almost invariably in attempting to give meaning to letters and words which she printed on the board. It was evident that he relied very heavily upon a combined kinesthetic-auditory method in his "reading." On the basis of the evidence thus obtained, his teacher thought that it would be wise to teach the boy first of all to recognize, reproduce and give the sounds of letters and letter combinations of an elementary sort. In this way she believed that efficiency in visual recognition might be established; the boy must learn to "feel" by saying or writing what was before him, and thus read it.

Arthur's discrimination for form had been found quite normal in his psychological examination, and it was evident that he had no difficulty in auditory differentiations. His comprehension was good, and although he lacked initiative to the extent that it was impossible to establish any sort of competitive spirit about his improvement from day to day, the boy was eager to please, was cooperative and amenable to suggestion. He was extremely conformed in all his reactions.

After a few hours of informal experimentation Arthur's teacher concluded that the best plan was to proceed at once to the alphabet, teach the A, B, C's according to the old-fashioned, mechanical method, and get something upon which to base a remedial program. Within a month the boy was able to recognize letters when printed, make them himself, and use them occasionally in writing words.

His teacher states, however, that he was "completely lacking in the knowledge of what word integration might mean. He hadn't the faintest idea of how to incorporate letters into words by listening to the sound. The sound of the individual letter was a thing in itself that to him could not be transferred into a group. The learning of words is for him then a very mechanical process, attained only by constant drill."

The next step was to establish the association of sound. This was done by giving Arthur over and over words with sound elements of all kinds, by drilling on the sounds of different letters, by having him say them to himself in an undertone, if he chose, by having him "feel" how to write the letter which stood for a certain sound. A complex of kinesthetic-auditory-visual association was thus induced. In another month his teacher noted "a very peculiar thing . . . although Arthur recognized letters and knew their sounds, if given a word containing letters whose sounds he knew perfectly well he had no conception of how to go about applying them to the spelling of a given word. Again his transfer of known sound, or discrimination of sound values, failed him. . . . For example, if he knew the word 'fan' and in the next lesson had the word 'man,' the fact that he could spell 'fan' did not help him at all. I couldn't seem to make him understand that he need only substitute one letter to get the desired results."

Proceeding slowly through lessons of primer material, with frequent testing for knowledge of letters whether written or spoken, then for simple words, his teacher gradually covered the work for the first grade. Constant repetition of spelling and of presentation of words in many different ways was necessary. At times Arthur was able to write and spell correctly short sentences dictated to him by his teacher, but after they were written he could not read them. Yet, only in this way was progress at all possible.

By January Arthur had covered the first grade material in reading. He was tested for his school proficiency and found to be of second grade ability in reading and in spelling. The school as well as the boy's mother reported to us that he was now doing his work for grade in school, and it seemed proper to discharge him from our rolls. He was now a good independent reader, able to proceed with the others in his class; a second grader in every sense of the word. Still he had difficulty with spelling—perhaps he always will have, for this ability involves visual imagery more than does any other school subject.

Here was a boy who, with the exception of a specialized sort of difficulty, was normal in every way, destined to be "left down" because he had acquired nothing in a very fundamental field as the result of a year's teaching. It was found that the reason for his difficulty was the fact that the method whereby most children learn to read was denied him because of an unusual imaginal endowment. Had his teacher but known it, his difficulty might easily have been eradicated when he first started his letter work. A few hours of special attention to assure herself that Arthur knew his phonic basis as well as did the other children probably would have eliminated the later necessity for clinic teaching here. Certainly a program of special teaching, doubtless briefer than our own, since we had to undo much that did not exist when the boy first began reading work, would have been far more economical than was the plan to have the child repeat a whole year of school and would have warranted the boy's placement according to his superior general competency, which should have meant promotion without question.