The success of remedial reading programs is often attributed to the teaching method used. This study was carried out to investigate the effect that motivation has on reading improvement following remediation. Through a group Word Recognition Test (Carver, 1970) the 32 most severely retarded readers in a large elementary school were selected and randomly placed in eight groups of four children each. The children were assigned to one of four discrete teaching methods for a period of 7 months. When word recognition tests were administered in January, May, and June, it was found that the total improvement made by each method was similar. The original average reading status of the subjects, which was -33 months, was reduced to approximately -3 months. A group of 30 next poorest readers from the same classes, who were administered the same tests throughout the time of the study, went from an average of -7 months to +3 months. The conclusion was reached that the reading improvement of the experimental group was not due to any single method used but to the atmosphere of approval and experience of success which altered the child's attitude and motivation. References are included. (DH)
Motivation versus Cognitive Methods in Remedial Reading

Clifford Carver
University of Manitoba

Many reasons have been put forward to explain why a child fails to learn to read, specifically why he fails in the visual recognition of words. Many methods, also, have been championed as to how this defect in word recognition should be remedied.

Each protagonist backs up his cause of failure, or his method of remediation, with apparent evidence. To some, word recognition failure might be attributed to home relations, perhaps between mother and child. Others might offer brain damage, perceptual difficulties, slow maturation, or even multiple causes.

Remediation methods are also varied. They range from linguistic approaches, training in visual or auditory perception, multisensory methods, psychiatry, motor training or even training in crawling and eye dominance.

The child's role in all this is, more frequently than not, ignored. He is viewed as something to which external correction is applied. Thus the child as a dynamic decision maker often has little relevance in remedial methods.

Most facts available to the teacher, regarding causes and remediation, are merely superficial. However, there is one well grounded fact available to all. It is, that only after several years exposure to the teaching of reading, can a child be judged to be a reading failure. This he demonstrates by being unable to read. It is
almost certain that by this time the child's confidence and esteem has been insulted. It is doubtful if even the adult student - a position we all have known - could survive even a fraction of the devastating failure that the retarded reader suffers. And of course many higher students do not survive. The longer the child has been taught without success, the greater the damage to his functioning as a normal human being.

Though failing in reading, the young child continues to mature. By the time therefore that he is judged to be retarded in word recognition, any earlier perceptual or maturational deficit might well have now developed sufficiently to enable him to progress in learning to read. However, he may now have lost the drive, attention and motivation necessary for utilizing his perceptual experiences. If this, to a lesser or greater degree, is true, then the illusion of many successful methods of remedial instruction is explained. In other words, the improvement made by a child could equally be due to his own internal reorganization caused by the attention he is receiving during remediation rather than to the content of the instruction. Experience shows that the commonest thread running through remedial education is the intensifying of interest shown by the adult, to the child himself. This is in contradistinction to the schools' interest in subject matter.

It was decided to test the hypothesis that children's improvement in reading, following remediation, is due less to the external cognitive teaching method employed than to the child's internal motivation.

A survey using a group Word Recognition Test (Carver, 1970) was carried out in a large Ontario school. The 32 most severely retarded
readers were identified (mean CA 7y3m; mean retardation 33 months). The assumption was made - as is made in practice - that these children needed remedial help, such help being instrumental in developing the children's reading ability.

Two further independent word recognition tests were administered to ensure that the most retarded readers had been selected. These were the Burt (Rearranged) Graded Word Reading Test (Vernon, 1938) and the word reading test from the Oxford Junior Workbook 3.

The 32 children were randomly arranged into 8 groups of 4 children in each. The groups were randomly paired, one of each pair being allocated to a male or female teacher.* Each pair was assigned to one of four teaching methods. The methods, designed to be as discrete as possible in content, were: a) Cards b) Language c) Visual Motor d) Reading.

Though each lesson was devised to be intrinsically interesting and varied, the content and times were strictly adhered to in order that each pair in a given teaching method went through an almost identical program. If one of the pairs of groups in a method found the content of the lesson rather easy, or rather difficult, the program was still carried out. The general level of work appropriate for the 8 children in a group was evaluated each week.

The Card method used carefully arranged visual material on cards (letters and pictures) which drew attention to letter-sound associations. No language elaboration was used, nor was the writing or reading of words allowed. All lessons were in the form of games, individually, in pairs, or with all four children in the group.

*Two senior psychology students: Mr. Malcom Beam and Miss Frances Farmer.
The **Language** method, which was purely oral, included stories, discussion, questions and language games. The timing, content and general direction of activities was still controlled though, of course, the depth of the individual child's participation could not be matched. Every child, however, was encouraged to participate and to express his feelings and ideas.

The **Visual Motor** method used only sensorimotor activities, such as balancing, touching, movement, left/right orientation, manipulation, jigsaws, etc. Language elaboration was not permitted in these activities, language being used only for simple instructions. Though pencil and paper were used for such activities as pattern copying, no material was used involving writing, letters, or words.

The **Reading** method acted as a standard (rather than a "control") to evaluate the effectiveness of the other methods. The Reading group used a workbook series which purported to teach the child word recognition by his own efforts (Oxford Junior Workbooks). Though no planning of lessons of course was necessary, a basic approach was used. Each child worked at his own speed. Guidance regarding what needed to be done was given initially. The children completed a double page spread which was then marked by the teacher. The child read to the teacher his completed work, corrected any errors and continued with the next double page. No elaboration, further explanation, or questioning took place regarding the teaching aimed for in the books.

Summing up, each "method" aimed to give training only in that mode, thus allowing the method to be clearly defined in its supposed efficacy.
in improving the child's word recognition.

Weekly 45 minute teaching sessions were given, commencing in the November, the children still participating in their normal class lessons during the rest of the week. Each pair of groups attended at the same time of day each week.

An important rider was added to the teaching methods, applying to all groups. It was that a warm friendly and approving atmosphere was to prevail, regardless of a child's disruptive behaviour or lack of ability.

The groups were taught over a period of 7 months. Retesting was carried out in January (after 5 visits); in May (after a further 10 visits); and in June (after a final 5 visits).

The January retesting (on all three word recognition tests) ensured that the children had settled down to the routine, and that progress could be evaluated during the main body of the teaching from January to May. This January retest meant also that the progress made in May could be judged regardless of any initial rapid progress that children often make when first receiving remedial education. Similarly, the June testing would show whether progress had been sustained.

After the May testing, each pair of groups was combined into the larger group of 8 children (representing that method), all teaching being carried out by a trained special education teacher *, still using the four discrete methods.

At the start of the study, the 30 next poorest readers from the same classes as the retarded readers were selected and tested.
throughout. These children (mean CA 7y5m mean retardation 7 months) were on average two months older than the children in the experimental groups.

The results of the investigation can be summarized as follows:

(a) The 32 retarded readers improved significantly at each retesting:

January (Word Recognition Test 19 months; Burt, 8 months)*
\[ t = 9.7, \ p < .01. \]

May (Word Recognition Test, 12 months; Burt, over 11 months)
\[ t = 13.3, \ p < .01. \]

June (Burt, 4 months).

(b) There was no difference in the total improvement made by the groups (in January and May) due to the method used (\( F = 6.5, \ F = .5 \)), to the sex of the teacher (\( F = 0.4; \ F = .01 \)) nor to the interaction of method and sex of teacher (\( F = 0.1; \ F = 1.0 \)).

(c) The combined groups also showed no significant difference between methods in June (\( F = 0.3 \)).

(d) The improvement made by the 32 retarded readers was significantly greater, in January and June, than the improvement made by the 30 class children (January, \( t = 2.26, \ p < .05 \); June, \( t = 3.4, \ p < .01 \)).

(e) The total improvement made by the retarded children was neither related to their IQ's (Raven Coloured Progressive Matrices) nor to their original Word Recognition Test scores.

It was concluded that the improvement of the retarded readers could not be attributed to the actual content of the teaching method. The total (June) improvements made by each method (using the Burt test) were:

* The Burt starts at a higher basal level than the Word Recognition Test.
Based on the Word Recognition Test scores, the original average reading status (against chronological age) of the 32 retarded readers and the 30 class children was, respectively, -33 months and -7 months. By May the figures were -6 months and +3 months. At this time (due to the lower ceiling of the Word Recognition Test) a better measure of improvement between May and June was given by the Burt Test. The retarded readers made an average increase of 4 months, reducing their average retardation to about 3 or 4 months while the 1½ month improvement by the 30 class children left their status unaffected (+3 months).

The Word Recognition Test median scores for the retarded readers and the 30 class children are shown below, the final figure being based on the improvement of 4 months and 1½ months by the Burt test.

**Work Recognition Medians**

<table>
<thead>
<tr>
<th></th>
<th>Retarded</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4y5m</td>
<td>6y10m</td>
</tr>
<tr>
<td>Oct/Nov</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan</td>
<td>5y6m</td>
<td>8y1m</td>
</tr>
<tr>
<td>May</td>
<td>7y6m</td>
<td>8y5m</td>
</tr>
<tr>
<td>June</td>
<td>(7y10m)</td>
<td>(8y6½m)</td>
</tr>
</tbody>
</table>

Two interpretations are possible. Firstly, it could be argued that the retarded readers would have improved in word recognition regardless of the group remedial work. Though doubtless some children would have improved it is difficult to accept that such sustained, above normal
improvement over all groups would have taken place spontaneously. If however, it is true that the remediation was ineffective, then it was equally so whichever method was used, including that of reading, thus casting doubt on the validity of remedial education itself.

If on the other hand, the remedial group work had had an effect, then the improvement still could not be attributed to the actual content of the group work.

It was concluded that there was sufficient evidence to indicate that the children had improved due to the remediation. It was considered that this was because many of the retarded were biologically able to read and that the group atmosphere, and approval, had released this ability by altering the child's attitude and motivation. This is perhaps borne out by the peripheral effects during the seven months work. For example, many children who had apparently lacked interest in the remedial work showed great need for the emotional outlets provided by the small group atmosphere. Also, the highly disruptive behavior of 4 or 5 children gradually subsided both in the groups and in class. One child lost his stutter and many were reported as showing improvement in class-work.

It is felt that this sort of study needs repeating by other methods. Teachers at school are in an ideal situation for carrying out such studies.
Carver, C. *A group or individual word recognition test: For the early stages, up to about 8 years 6 months.* London: Univ. London Press, 1970


Vernon, P. E. *Standardisation of a graded word reading test.* London: Univ. London Press, 1938