A remedial reading program designed for intermediate-grade students who read from 1 to 7 years below grade level was studied. The program provided individualized instruction within classes homogeneously grouped on the basis of reading level only. Six seventh-grade classes were studied, with three acting as homogeneously grouped experimental classes and three acting as controls. All groups contained white, black, and Puerto Rican boys and girls, but sex and race were not factors in group establishment. Class sizes ranged from 22 to 28 students, and experimental students were transferred whenever reading levels changed. Materials were specially chosen to meet experimental class needs. Oral and silent reading, charts of progress, programmed materials, and skill developmental exercises were used in experimental classes. Pretests and posttests administered in September and June were analyzed using t-tests. All comparisons demonstrated significantly better gains in reading (p < .01) for the experimental groups. This was true for all races and both sexes. It was concluded that homogeneous grouping was of considerable value in this remedial reading program for intermediate-grade students. Tables and references are included. (MS)
Homogeneous Grouping and the Individualization of Instruction in Remedial Reading in an Intermediate School

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Introduction

Traditionally, remedial reading has been approached in intermediate schools in a very specific way. Students have been referred to a reading specialist as individuals or in very small groups. This practice is still prevalent today. Students are referred to specialists, and specialists in most inner city schools have long waiting lists of students. Most of these students will never get to work with the reading teacher. The numbers are simply too great.

There may have been a time when numbers of students needing remedial reading were small enough to have made this approach valid. At present, many of these intermediate schools have sixty to seventy percent of their students in need of remedial reading. Clearly the traditional approach is grossly inadequate for today's needs. In schools where more than half of the total student body are one or more years behind in reading, the specialist serving a very small percentage of these students is of little value to any but the small number directly taught.

Problem

What is needed is a new approach to remedial reading. This approach must attempt to serve the large numbers of students needing such instruction. It must be set up within the obvious physical and financial limitations of existing intermediate schools. A program must be set up to facilitate the teaching and learning of reading by large numbers of intermediate school students who are from one to seven years below grade level in reading. The problem of this study is to determine whether such a program will be successful.
The rationale for this study is that if improvement of reading is the problem, group homogeneously on the basis of reading. This narrows the range of student levels and needs in each class. Each class becomes more suitable for its individual members in terms of both reading and class interaction. The homogeneous group tends to individualize instruction.

This project will be an attempt to apply to individuals within classroom settings remedial techniques with as much success as might be hoped for in the traditional individual or small group setting. If a method for doing this can be found, vast numbers of failures and dropouts might be prevented. The psychological concomitants of failure might be alleviated among many students.

The following terms are of central importance in this study:

Retarded reader -- intermediate student in the seventh grade reading from a readiness level to 4.5 years.
Reading level -- the functional reading level of a student at any given time during the year.
Individualization of instruction -- attempting to remediate reading problems of individuals in two ways:
1. by seeing them as individuals within a group as much as possible.
2. by forming groups on a homogeneous basis, strictly by reading level, thus narrowing the area of needed remediation in reading throughout the members of the group.

Homogeneous groups set up only on the basis of current reading levels.
It is hypothesized that grouping remedial reading classes of students solely on the basis of current reading levels with flexibility for moving them to other similar classes according to rate of progress will not give rise to achievement in reading greater than that of students in classes grouped according to a variety of criteria (i.e. achievement, reading level, teacher assessment, etc.).

This study is limited to six seventh grade classes, three experimental and three control. Approximately one-third of the students beginning in September will be gone from the school by June due to the high rate of transience of the population in this area. Sex and race (Negro and Puerto Rican) are not to be considered in establishing groups. The only variable to be isolated in grouping is reading level.

Review of the Literature

There is extensive literature related to homogeneous grouping for developmental reading instruction, but far less for instruction in remedial reading. The latter, almost by definition, has implied instruction on the basis of individuals or small groups.
Among studies concerned with homogeneous grouping in the area of reading, results are mixed at best. Sartain (1968) reports poor results for several experiments involving homogeneous grouping. Of particular interest, he cites Balow (1962) who grouped homogeneously on the basis of reading grades alone for groups from first through ninth grade. No significant improvement was found. A report by the Euclid English Demonstration center (no date) concludes that there is no particular classroom organization that will transform the reluctant reader into a skillful one. Most of the studies considered homogeneous grouping to be based on multiple factors such as I.Q., teacher evaluation, achievement, reading scores, etc. Lieberman (no date) found no significant difference in reading improvement for such a group.

Justman's (1968) extensive study of third and fourth grade students grouped on the basis of reading scores also yielded no significant difference in reading improvement. However, he suggests that studies in the past have concentrated on homogeneous grouping without due regard to curricular modifications as a concomitant. Justman says that definite programs must be specifically designed for the several ability levels into which classes are grouped. This proposal to create specifically designed programs for the different needs of each of the specially designed groups seems to be the next step needed.
Spache (1963) points out that grouping by reading grade often overlooks chronological age range with all its attendant problems of variation of physical and social maturity. This might be a greater possible source of difficulty in remedial programs in secondary school where students grouped by reading levels might vary considerably in age.

Spache (1963) also states that sectioning by reading levels is probably most effective when it involves wide curriculum adjustments. On the secondary level, with its greater variety of subjects and teachers, this would seem to be even more crucial. It implies the need for adjustment in curriculum in classes outside the reading class itself: in social studies, science, etc. It also implies the need to make subject teachers more aware of the place of reading in their activities.

Thelen (1967) states that in remedial work especially, the most important element in rehabilitation is the interpersonal relationships between students and some staff member. Remarkable results, gains of two to four years in reading, have been reported when the student is finally able to enter into a healthy relationship. Thelen also makes the point that a teacher does a better job with some pupils than with others, and therefore it makes sense to assign him a class composed of the sort of students with whom he has been found to do a better job.
Rufus Hartill (1936) points out that under heterogeneous grouping no one receives either an enriched course or a modified one. Hartill also says that grouping should at all times be flexible and temporary.

The literature has many useful suggestions for the specific program sought. The great thrust in reading programs now is toward individualization. The literature contains many suggestions for approaches to this. Though most are for developmental reading, they can usually be transferred in some fashion to remedial classes. Cohen (no date) calls for efforts by teachers to individualize large group (i.e. normal classes) instruction in reading. Sartain (1968) says that some teachers have moved beyond grouping to completely individualized teaching, with each child on different materials, levels, using individual conferences, etc.

Reading skills centers (Davidoff, 1971) have been found very useful for teaching reading via individually diagnosed and prescribed lessons. Speech therapy added to a reading program resulted in significantly better test results (Artley, 1968). Programmed materials as tools for individualizing instruction, and provision for continuous regrouping are useful (Komoski, 1964). More emphasis on self-diagnosis is seen as desirable (Strange, 1968). Combinations of tutoring with classroom teaching are more effective than either one alone (Sartain, 1968).
Procedure

Seventy-five of the poorest readers in the seventh grade were screened for placement in the three experimental classes. The tests used were Metropolitan Achievement Tests in Reading Primary II, Elementary B, and Intermediate Bm. These students were ranked from lowest to highest and placed in homogeneous classes, so:

\[
\begin{align*}
&\text{3.6 to 4.5} \\
&\text{2.6 to 3.5} \\
&\text{Readiness to 2.5}
\end{align*}
\]

There were 22 students in the lowest class, 24 in the middle class, and 28 in the highest class. The control group consisted of three remedial reading classes of 25 students each set up along usual lines. Each included students from all three reading levels. All assignments to homogeneous groups were to be flexible and considered temporary. As soon as a child surpassed or fell behind his group, he or she was transferred to a more appropriate group.

The key factor in choosing materials for each homogeneous class was level of difficulty. Nothing too difficult.
that could reinforce patterns of failure, was used. Since each class was homogeneous, a wide variety of materials was brought in. Only the variable of readability level was considered crucial. Aside from that, variety of every other type was sought.

Each homogeneous group had at least one book in common for oral class reading. Since these students had not yet mastered phonics (especially in the two lowest classes), auditory and oral repetition was considered highly desirable. Since all students within each class read approximately as well as the others, this oral reading was quickly accepted by virtually all students. There was no stigma attached to the level of the book being used, or to mistakes common to all. Unlike the control groups, the students in the homogeneous groups participated freely in oral work. In the control groups this was possible only in small homogeneous subgroups or with individuals, and therefore was done much less. It should be stressed that in elementary school oral reading is very important for phonic development. These secondary students were reading on an elementary level and needed oral and auditory work. In heterogeneous secondary school classes this is a tremendous problem, the less able often simply refusing to read out loud in any group situation.
In the homogeneous groups considerable peer interaction was developed also in competition. This was done by charts showing numbers of words one could read, number of books read independently, etc.

Both control and experimental classes made extensive use of programmed materials — the Sullivan Series and Educational Developmental Laboratories materials were most used. Both groups used individual student-teacher conferences, based on ongoing teacher diagnosis, and as much self-diagnosis by students as possible. Students were encouraged to see where they stood and what their next goal should be.

Pre-tests and post-tests were administered in September and early June. I.S. 139, 345 Brook Avenue, Bronx, N. Y. provided test materials. The subjects were seventh grade students, seventy-five percent Puerto Rican and twenty-five percent Negro.

Data obtained will show any difference that might occur in reading improvement between the experimental groups and the control groups. Tests for significance of differences between groups was measured by t tests.
Findings

Table 1 "Statistical Comparison of Gains in Reading by Experimental and Control Group Students" illustrates the results of pre and post testing. All comparisons demonstrated significantly greater gains in reading in favor of the experimental classes at the .01 level.

Table 1: Statistical Comparison of Gains in Reading by Experimental and Control Group Students

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>S.E.</th>
<th>Diff.</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control I</td>
<td>21</td>
<td>0.70</td>
<td>0.39</td>
<td>0.09</td>
<td>1.06</td>
<td>5.94*</td>
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<td>Exp. I</td>
<td>17</td>
<td>1.76</td>
<td>0.62</td>
<td>0.15</td>
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<tr>
<td>Control II</td>
<td>20</td>
<td>0.71</td>
<td>0.59</td>
<td>0.20</td>
<td>1.0</td>
<td>4.20*</td>
</tr>
<tr>
<td>Exp. II</td>
<td>18</td>
<td>1.71</td>
<td>0.80</td>
<td>0.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control III</td>
<td>20</td>
<td>1.00</td>
<td>0.38</td>
<td>0.10</td>
<td>0.72</td>
<td>4.12*</td>
</tr>
<tr>
<td>Exp. III</td>
<td>16</td>
<td>1.72</td>
<td>0.61</td>
<td>0.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negro Co.</td>
<td>21</td>
<td>0.79</td>
<td>0.48</td>
<td>0.11</td>
<td>0.74</td>
<td>3.46*</td>
</tr>
<tr>
<td>Negro Exp.</td>
<td>18</td>
<td>1.53</td>
<td>0.76</td>
<td>0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puerto Rican C.</td>
<td>36</td>
<td>0.79</td>
<td>0.53</td>
<td>0.09</td>
<td>1.04</td>
<td>7.59*</td>
</tr>
<tr>
<td>Puerto Rican Exp.</td>
<td>37</td>
<td>1.83</td>
<td>0.62</td>
<td>0.10</td>
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<td></td>
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<tr>
<td>Boys C.</td>
<td>31</td>
<td>0.73</td>
<td>0.46</td>
<td>0.08</td>
<td>0.98</td>
<td>6.99*</td>
</tr>
<tr>
<td>Boys Exp.</td>
<td>36</td>
<td>1.71</td>
<td>0.67</td>
<td>0.11</td>
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<td></td>
</tr>
<tr>
<td>Girls C.</td>
<td>26</td>
<td>0.86</td>
<td>0.56</td>
<td>0.11</td>
<td>0.90</td>
<td>4.46*</td>
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<tr>
<td>Girls Exp.</td>
<td>19</td>
<td>1.77</td>
<td>0.72</td>
<td>0.17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .01 level
The basic comparison between the three control and three experimental classes showed significantly greater improvement in reading for each of the three classes in the experimental group over their counterpart in the control group at the .01 level.

Comparing Negroes, Puerto Ricans, boys and girls in the experimental and control groups, results were consistently in favor of those students in the experimental classes. Significance of differences in gains for those in the experimental groups was at the .01 level.

Discussion of Results

Clearly, the experimental classes gained considerably more than their counterparts in the control groups. During the year interesting observations were made by the teachers involved which might make differences more understandable.

The poorest readers seemed to gain confidence in the homogeneous classes. They "fit in." They participated in class work and demonstrated virtually no embarrassment over the low level of materials they used both in class and individual work. This was not true in corresponding control classes. Even in their individual work they constantly compared themselves and often rejected appropriate materials as "too easy" or "baby stuff."

It should also be stated that the grouping procedure utilized in this study was "homogeneous" in a strictly defined way. It was applied to certain students with specific needs and similar chronological ages. Placement was flexible. In fact,
twenty-five interclass transfers were made among the three experimental classes for individual students as they gradually outgrew or fell behind their class. In addition to the unlimited flexibility in class placement, the programs for the experimental classes were designed for the specific reading levels of the students in each. Only materials on appropriate levels were utilized in each class. Further, oral class work made up a large part of the year's work for each of the experimental classes. A concomitant of this was some improvement in the speech patterns of many students.

Finally, sympathetic teachers were found in Social Studies and Science for the two lowest level reading classes in the experimental group. They agreed to eliminate the seventh grade textbooks completely. (These are normally used in a limited way -- mostly for homework). All other teachers involved with these two classes (art, gym, shop, etc.) were also volunteers, though reading plays little or no part in their classes.

In sum, the results were produced by grouping homogeneously, establishing specific programs for each of the homogeneous groups, and making appropriate adjustments in other areas of the curriculum.

Profitable further study might be to perform the same experiment on a much larger scale. An inservice program for teacher and administrator training should be developed.
Summary and Conclusion

In order to try to deal with the tremendous problem of remedial reading in the intermediate schools, a method must be found to somehow apply remedial instruction to extremely large numbers of students. For all practical purposes this method must be possible within the existing financial and physical limitations of the schools.

The hypothesis is: Grouping remedial reading classes of students solely on the basis of current reading levels with flexibility for moving them to other similar classes according to rate of progress will not give rise to achievement in reading greater than that of students in classes grouped according to a variety of criteria (i.e. achievement, reading level, teacher assessment, etc.).

The study is based on an experimental group of three seventh grade classes and three control group classes. The experimental classes were grouped homogeneously on the basis of reading level. These were readiness to 2.5, 2.6 to 3.5, 3.6 to 4.5. Placement of students was flexible, according to their progress. The three control groups were set up on traditional criteria, and each contained the whole range of reading levels.

Both groups used a wide variety of materials, including programmed materials. The experimental classes each had at least one book for oral classroom reading.

Standardized tests were used for pre and post testing. Significant differences in reading improvement for the experimental classes was at the .01 level. These results seem to be a
factor of specific programs designed for each homogeneous group, general curriculum adjustments, and others besides the homogeneous groups.
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