An experimental study was conducted to determine whether the kind of homework a teacher gave made a difference in academic achievement in elementary school children and whether homework such as collecting, observing, listening, and constructing models improved reading ability. Subjects were nearly 700 students in grades 4 through 6 in two schools in Tempe, Arizona. The children were from all socioeconomic backgrounds. Individualized enrichment homework (IEH) assignments were given to groups of the students for the first 16 weeks of the school year in reading, spelling, language, arithmetic, social studies, and science. The students were given complete freedom in how they planned their homework. Tests indicated that the reading ability of these children benefited from IEH; that when children are actively involved in their own learning, structured to their own personal interests, gain in ability in handling reading skills becomes apparent. (Author/NH)
AN INVESTIGATION OF THE EFFECT OF INDIVIDUALIZED ENRICHMENT HOMEWORK UPON THE ACADEMIC ACHIEVEMENT OF CHILDREN IN THE FOURTH, FIFTH, AND SIXTH GRADES

Introduction

Does the kind of homework a teacher gives make a difference in academic achievement on elementary school children? Can homework such as collecting, observing, listening, constructing models, etc. improve reading ability? The answer to both of these questions was concluded to be affirmative in an experimental study conducted on nearly 700 students in the 4th, 5th, and 6th grades in two schools in the Tempe Elementary School District #3, Tempe, Arizona, during the academic year of 1968-69.

This study encompassed children of all socio-economic patterns ranging from children of higher income families to the migrant worker and welfare type with a small percentage of Spanish-speaking children.
Structure of the Study

Individually assigned enrichment homework (IEH) assignments were given to groups of 4th, 5th, and 6th grade students over a period of the first 16 weeks of the academic year in 6 subject areas; Reading (Word Meaning, Paragraph Meaning), Spelling, Language, Arithmetic (Computations, Concepts, Applications), Social Studies, and Science. These assignments were separate from a textbook-type assignment and were worked entirely outside the school environment. Two assignments per subject area were given every four weeks with a minimum time limit set per assignment for each grade level. Fourth grade students spent a minimum of 20 minutes on each assignment; fifth grade students spent 30 minutes; sixth grade students gave a minimum of forty minutes to each assignment. There were no maximum time limits imposed. Nor were students required to complete their homework. However, for the purposes of the experimental control design of the study itself, only children who had completed at least two-thirds of their assignments were entered into the final analysis of measurement of academic achievement. These students' test results were measured against groups of 4th, 5th, and 6th grade students who were given no individualized enrichment homework in the 6 subject areas during the same period of time.

For the most part, the individualized enrichment homework assignments were student-structured. The students were given complete freedom in how they planned their homework. With the help of their teachers they analyzed their own needs in the given areas and were guided in an assignment which they were capable of handling taking into account a number of considerations. These considerations were special interests, academic ability, academic needs,
extra-curricular activities, home environment, and availability of resources. Even though they had teacher guidance, the student was given the ultimate choice of the kind and depth of assignment he or she wanted to pursue.

The individualized enrichment homework assignments were varied. They ranged in depth in the areas of reading, writing, collecting specimens of all kinds, observing numerous varied situations, construction of models and realia, listening for diversification and distinction in varied environments, and researching by employing different techniques. Immediate positive feedback to the student using various methods was employed by the teacher.

**Results of IEH and its Effect on Reading Ability**

Academic achievement was measured on the 1964 Stanford Achievement Test Battery (1). Taking the Battery as a whole, the academic achievement in terms of grade equivalent scores were all in favor of the students who had IEH (Treatment Group) as against those who did not (Control Group). The analysis of the data in Reading (Word Meaning, Paragraph Meaning) achievement alone produced a large significant difference in favor of those who received IEH as against those who did not. The following tables show these results in terms of grade equivalent scores:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Treatment Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th</td>
<td>5.3</td>
<td>4.5</td>
</tr>
<tr>
<td>5th</td>
<td>6.1</td>
<td>4.8</td>
</tr>
<tr>
<td>6th</td>
<td>7.1</td>
<td>5.7</td>
</tr>
</tbody>
</table>
In Reading achievement alone, the fifth grades, according to grade equivalent scores, received the most benefit from IEH. However, there was a significant difference in academic achievement in all grades which had individualized enrichment homework as against those who did not. When the data was analyzed according to I.Q. groups, that is, low, medium, and high, for the purposes of the experimental design, it was found that all groups received proportionately an equal amount of academic achievement.

**Implications for Reading Achievement**

The results of this 16 week study clearly indicate that when children are actively involved in their own learning structured to their own personal interests, gain in ability in handling reading skills becomes apparent. Even though many initial homework assignments in any academic area may not be reading assignments per se, they do lead to extended learning which inevitably involve the use of reading skills of all kinds.

As indicated in this study, a pupil-centered classroom along with positive feedback and teacher encouragement are necessary elements to produce independent
readers. Teachers of reading need to understand that to produce results of the kind reported in this study means that there should be an emphasis on the child's special interests, academic ability, academic needs, extracurricular activities, home environment, and availability of resources. This is "individualized enrichment homework."

References: