

RESULTS OF THE READING PROGRAM

Thomas Klein

The evaluation data documenting the success of the KEEP comprehension reading program is presented here in terms of three different comparisons. The first is an analysis of performance differences among six successive cohorts in the KEEP school, during which time the program changed from a phonics to a comprehension orientation. The second comparison is between the KEEP "at risk" children instructed with the comprehension program and a similar group of "at risk" control children enrolled in various public schools in the KEEP catchment area. The third comparison assesses the efficacy of the KEEP comprehension program when exported to public schools.

Comparison I: Phonics vs. Comprehension program at KEEP. The six cohorts at KEEP received reading instruction in the following manner:

Cohort I was instructed entirely with the phonics-oriented curriculum;

Cohort II was instructed with the phonics-oriented curriculum in the first and second grades and then received an early version of the comprehension program in the third grade;

Cohort III received the phonics-oriented curriculum during the first semester of the first grade, a pilot version of the comprehension curriculum during the second semester, and the comprehension program thereafter.

Cohorts IV, V, and VI were instructed entirely with the KEEP comprehension program.

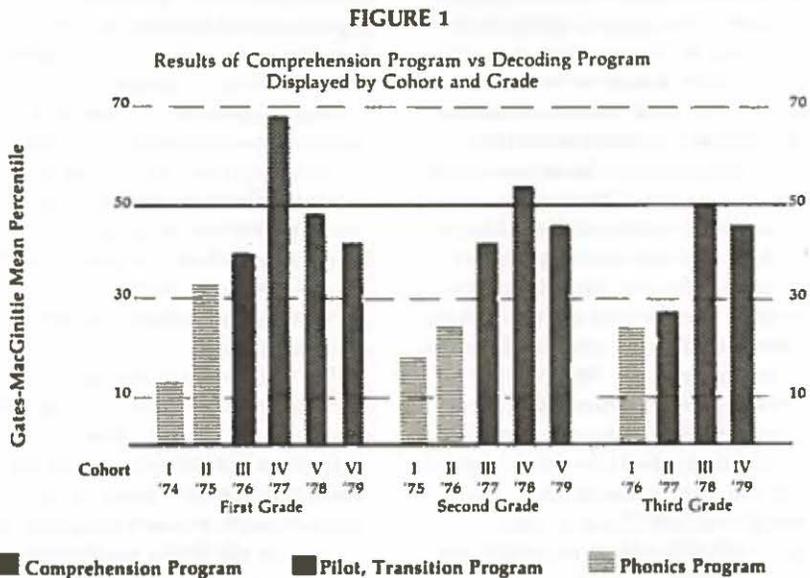
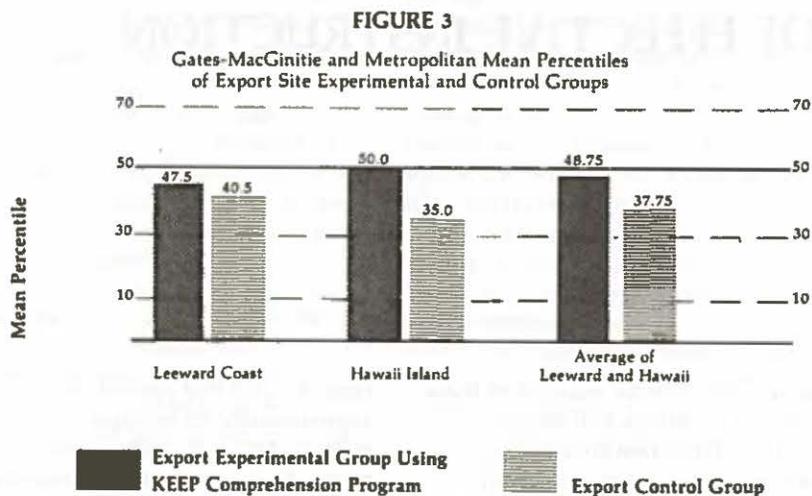
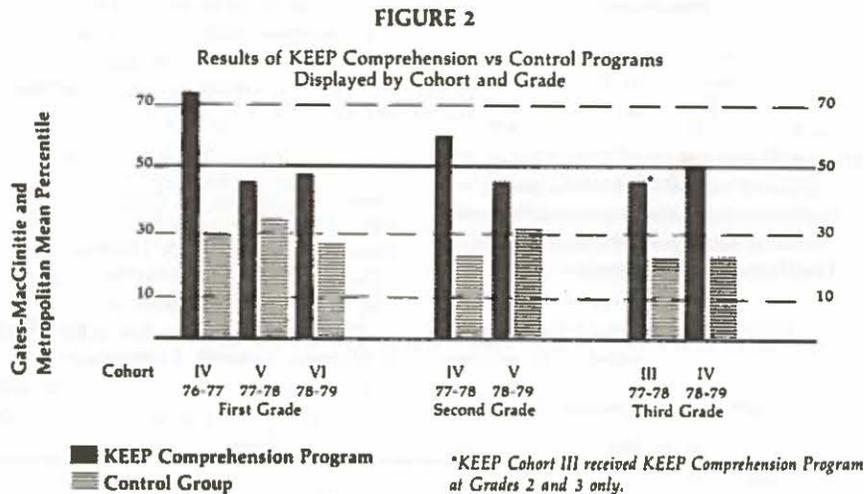


Figure 1 presents the end-of-school-year Gates-MacGinitie Reading Test¹ results for each cohort at each grade level. The results are in the form of percentiles derived from the mean standard score of each class.

Under the phonics-oriented curriculum, Cohorts I and II improved from year to year. Yet, the more dramatic shift came with Cohorts III and IV who received two and three years of the comprehension-based curriculum, respectively. These higher levels of achievement have continued for Cohort V over two years and for Cohort VI at the first grade.

The sample sizes here range from a maximum of 30 to a minimum of 23 students. Thus, fluctuations from year to year or class to class are not entirely unexpected.

Comparison II: Comprehension-instructed children at KEEP and public school control children. Approximately 75 percent of the KEEP children can be considered "at risk" for learning difficulties in that they come from families receiving financial assistance from the State's Department of Social Services and Housing (DSSH). Beginning with Cohort III, a control group was selected in the same manner as the KEEP DSSH students. The control students attended one of eleven public schools in the same catchment area as KEEP. All schools are located in an economically-depressed area of the city. Descriptions of control classes, obtained by interview and direct observation, are available.²



In Figure 2 the comparison of end-of-year reading performance by the KEEP comprehension cohorts and their public school controls are shown. Here the measure of performance is the average of the percentiles associated with each class mean on the Gates-MacGinitie and the reading portion of the Metropolitan Achievement Tests.³ Note that for each cohort at each grade level the KEEP comprehension-instructed children exceed their controls. Most comparisons show statistically significant differences. Again, small sample size must be considered in viewing these results. Since the

KEEP group includes only DSSH children, the maximum sample in any class is 23. Control group samples are larger. If the classes within each grade level are taken as replications of a smaller experiment, using a Bayesian approach, the combined results are highly significant. A statistically more conservative approach to overcome the effect of small sample size is to combine classes within grade levels. If this is done, the KEEP comprehension-instructed children perform significantly better than their controls at every grade.

Furthermore, the KEEP children are performing at approximately the national norm.

Comparison III: KEEP and non-KEEP instructed classes at public school exportation sites. Can a program developed in a facility with strong financial support and a highly-selected staff be successfully disseminated to the real world? In the last years we have had the opportunity to address this question at two elementary schools—one in Leeward Oahu and one on the island of Hawaii. Each of these schools enrolls approximately one-third Hawaiian or part-Hawaiian children. In Leeward Oahu, two of KEEP's teachers commuted daily to teach the reading portion of the curriculum to two of four first-grade classes. The other two classes formed the comparison group. On the island of Hawaii, two regular first-grade public school teachers were trained by KEEP personnel prior to the beginning of the school year and continued to receive consultation from a KEEP educational specialist at intervals of approximately three weeks. Two other first-grade classes constituted the comparison group at that site.

The end-of-year reading results from these two export sites are shown in Figure 3. Again, the reading scores reported are the averages of the percentiles associated with each class mean on the Gates-MacGinitie total and the Metropolitan Reading Achievement total. At each exportation site, the KEEP classes exceed their comparison classes. The term "comparison" is used here rather than "control" since some diffusion of facets of the KEEP reading program into the control classes had taken place. Such diffusion of experimental variables into control classes probably cannot be prevented, particularly, if the goodwill of the exportation site is to be upheld.

Despite these threats to validity, the combined results show that the KEEP-instructed children have scores that significantly exceed those of the control groups.

In summary, the data presented here demonstrate the promise of the KEEP comprehension-oriented reading program for Hawaiian children. Its success has been demonstrated through cohort analysis, by a true experiment using the students in the KEEP demonstrations school and a similar control sample in the public schools, and through dissemination to the public schools.

Footnotes

¹Gates, A.I. and W.H. MacGinitie. *Gates-MacGinitie Reading Tests*, New York: Teachers College, Columbia University, 1965.

²Hao, R. *Comparative Data on Reading Programs: KEEP and Kalihi Public Schools*, Kamehameha Early Education Program Technical Report No. 97; Honolulu: The Kamehameha Schools.

³Durost, W.N., H.H. Bixler, J.W. Wrightstone, G.A. Prescott and I.H. Balow. *Metropolitan Achievement Tests*, New York: Harcourt Brace Jovanovich, 1971.

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CHARACTERISTICS OF EFFECTIVE INSTRUCTION

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The question naturally arises: In what way is the KEEP reading program similar to other effective educational programs and in what way is it unique? A consensus of important instructional elements has been emerging in recent years from two kinds of investigations—(1) correlational studies such as the Texas Teacher Effectiveness Study,¹ the Beginning Teacher Evaluation Study,² and several studies of Follow-Through classrooms;³ and, experimental work such as the First-Grade Reading Group Study in Texas⁴ and studies at the Far West Laboratory,⁵ and from Tom Good⁶ and colleagues in Missouri.

Although these studies differ in their definitions of variables, in the range of variables included, and in the grouping of these variables, there is encouraging overlap at the more general level. Many different lists of important elements could be

constructed from an analysis of these studies. This article will discuss effective instruction under five headings which seem reasonably representative. Each of these general elements of effective instruction will be described briefly and the manner in which KEEP has adopted these elements illustrated.

Teacher-Controlled Classroom Activities

The classroom activities—particularly the instructional activities—should be controlled by the teacher, rather than left to the choice of the students. This clearly is an element of the KEEP program. At times we have experimented with giving students limited choice of activities, but, basically, the student's day is highly structured by the teacher. Language arts time is divided

typically into five periods of approximately 20 minutes each. The student, for each of these periods, is to be at a specific teacher-determined location in the room, working on teacher-assigned tasks.

A Structured Curriculum

The curriculum should be structured having specific goals rather than be open-ended, as in individualized or discovery learning approaches. Instruction should emphasize academic skills, be rapidly paced, and proceed in small steps; while student progress should be actively monitored.

The core of the KEEP reading program is a set of criterion-referenced objectives with associated tests, called the Kamehameha Reading Objective System (KROS). The objectives represent an orderly sequence of skills to be mastered by