A statewide assessment study of reading programs in Rhode Island is described. Data concerning the history of the primary reading program of the 1965-66 fourth-grade class were gathered; a status study of the reading programs throughout the elementary grades for that year was conducted. Principals' and teachers' opinions on the requirements for a good reading program were surveyed. Data indicated that reading comprehension was more closely related to family income and education than to any facet of the school reading program, that the most effective approach to reading was the whole-word approach with gradual phonics, that remedial work administered during school hours was more successful than that offered during nonschool hours, that a class of 35 students was the maximum size for successful reading achievement, and that students who had used supplementary readers in addition to basal readers achieved better. The status study indicated that the typical reading program was composed of self-contained classrooms of ability grouped children. Approximately 6 weeks of readiness activities were followed by work in basal and supplementary readers. Phonics and study skills were introduced in the primary and middle grades. Principals and teachers expressed the need for reading specialists, remedial teachers, consultants, and teacher training in the teaching of reading. (BS)
Good afternoon, friends in reading. It is a privilege to be with you today. I am here to tell you about a Statewide Study of Reading Programs conducted in the spring of 1966 in the State of Rhode Island.

The state-wide study was really three studies in one. Part I gathered a history of the 1965-66 fourth-grade class as it related to their primary-grade reading program. Part II was a status study of reading programs throughout the elementary grades for that year. Part III was a survey of what elementary principals and teachers thought they needed in order to have a good reading program. Each of these studies was complete in itself and produced information that was important to program development at both the state and local levels. I would like to tell you quickly about Parts II and III -- what the status was in the spring of 1966 and what principals and teachers perceived as their needs -- and
then go back to Part I and explain what we did with the history of the fourth-grade class.

The questionnaires for all three parts of the study were sent out in one booklet to every elementary school in the state that contained a fourth grade. There were 346 public, parochial, and private schools in the state fitting that description. Within a few weeks we had an eighty-five percent return on the questionnaires, thanks to the help of a very efficient Advisory Committee.

Part II: The Status Study

Findings on Part II, the status study, told us how many schools were doing what kinds of things. Rather than to take you wading in statistics, I will report what the largest number of schools were doing.

During the 1965-66 school year, nearly half of the schools had kindergartens and most of these planned readiness activities for the majority of the class. Only about one-fifth of them gave formal reading instruction to the majority of the class.

A typical program. The largest number of schools entered first graders at five years, eight months. The typical child attended a school that was organized into self-contained classrooms in which children were grouped for reading by ability. He was involved in readiness activities for six or more weeks before beginning a whole-word approach to
reading. A single reading series was used for the basic part of his program but many supplementary readers were available to use as needed.

While in the primary grades, he used supplementary phonics materials and in the middle grades he was frequently taught a lesson in the study skills. His teacher used records and tapes to teach listening skills. There were kits and other supplementary materials in the school for practicing reading skills.

Signs of change. The typical program, as I have described it, sounds fairly traditional, but the survey did reveal a few breaks from tradition. Forty percent of the schools during the year 1965-66 were trying something new in one or more classrooms. One arrangement that we found becoming popular was the use of three different basal series of readers for the three ability groups so that the characteristics of the basal series could be matched with the needs of the learners and also so that slower groups wouldn't be reading stories they had heard twice before.

Another element of change noticed was that classroom barriers were beginning to break down. The most prevalent move was toward within-grade grouping; i.e., teachers at the same grade level exchanged some pupils to achieve better grouping. Many schools were using a Joplin-type plan of across-grade grouping and a few schools had become completely nongraded.
So, while a majority of schools remained fairly traditional, there were signs that many local educators were searching for better ways to handle individual needs. Unfortunately, not one of these changes was set up as an organized research project so that differences could be tested.

School principals have told me that Part II of the questionnaire was particularly valuable in that it acquainted them with alternatives to their present program that the staff had not thought of, so that participating in the survey was somewhat instructional.

Part III: Needs in Reading Programs

Now for a quick look at Part III of the study. What did principals and teachers think were the greatest needs in the area of reading? Both groups thought that the greatest need was for reading specialists -- remedial teachers and consultants. Another need frequently mentioned was teacher education in reading. Several teachers wrote notes on this part of the questionnaire saying that they didn't need courses about reading. They wanted courses that taught them specific methods and techniques for teaching the skills and gave them answers to their classroom problems.

Other needs mentioned were: more supplementary materials, smaller classes, more time to teach and to plan, diagnostic testing, and better library facilities. It is obvious that two years ago, teachers were looking for help. Many changes
have taken place over the last two years and I am sure some of these problem areas have been improved.

One advantage of the Part III survey was that it caused principals and teachers to take a good look at their programs; then, the report that followed enabled them to see where they fit into the state-wide picture.

This has been a brief treatment of Parts II and III, but those interested in the data can obtain a copy of the report through ERIC Document Reproduction Service. I would like to save the few minutes remaining to talk to you about Part I of the study.

Part I: History of Fourth Graders

Part I was a little different from the rest of the survey. As I said, we gathered a history of fourth graders, the experiences they had had in reading from the time they entered kindergarten. The twenty items in this part of the study covered such factors as type of kindergarten, entrance age, extent of readiness activities, approach to reading, grouping practices, materials of instruction, consultant service, library facilities, community characteristics, etc., as they applied to one particular class throughout the state.

Availability of State Testing Program results. The reason we collected the history of fourth-grade students was because fourth grade is one of the grades tested in our State Testing Program in October of each year. Survey data
on the primary-grade reading program of these fourth graders were programmed into the computer with State Testing Program scores. We were able to match survey and test data for eighty-two percent of all the public, parochial, and private schools in the state. This sample included scores for 12,695 fourth-grade children. The results of this analysis showed which of the twenty factors that were surveyed contributed to reading comprehension at fourth-grade level.

Community characteristics affect raw scores. One of the important findings was that reading comprehension raw scores are much more closely related to the levels of income and education in the community than they are to any facet of the school reading program. On the average, children who come from communities where the levels of income and education are high will achieve above average and vice versa. Removing the effect of intelligence on achievement, however, removed the effects of community characteristics. This finding implies that if you test two groups and find them different, the difference may be due to the amount of money their parents earn or the amount of education their parents received and not to the kind of program the children received in school. Since community characteristics seem to affect both achievement and intelligence, to test differences in school programs it is necessary to equate groups on intelligence through the use of covariance or some similar process. The deviation-from-regression score was used in this study.

Program-effectiveness criteria. The analysis of deviation
scores for groups divided on the basis of responses to the twenty survey items revealed that some reading practices were more effective than others. The most effective approach to reading for this class was the whole-word approach with gradual phonics. The fourth-grade comprehension scores for schools using the whole-word method exceeded the scores for schools using an intensive phonics approach at the .01 level of significance. That means that there was less than one chance in a hundred that children taught by an intensive phonics approach comprehended as well as children taught by a whole-word method. We also found that when a complete phonics program was added as a supplement to a basic program that stressed comprehension, one of the highest averages in this study was produced. On the other hand, the use of phonics workbooks, outside the context of a complete phonics program, was ineffective. Scores for schools using phonics workbooks were below the average expected for children of equal intelligence.

It seems appropriate here to draw a distinction between a complete phonics program and the use of phonics workbooks. A complete phonics program stresses the development of auditory discrimination and perception by including many listening and speaking activities. In contrast, phonics workbooks lend themselves to assignment as seatwork. The way they are used may emphasize visual practice whereas the application of phonics depends upon auditory perception and auditory memory.
which are not developed in a workbook program, as a rule.

What the findings seem to say is: Stress comprehension in the basic part of the reading program and add a complete phonics program as a supplement -- a program that includes the auditory skills. Phonics workbooks alone are no help. At least, this describes the program that seemed to work for the fourth-grade class studied.

This finding is very significant in view of the current controversy over the place of phonics in a reading program. The decoding emphasis was shown to be important; but, if you want students to understand what they read when they reach the middle grades, then comprehension must be the major goal from the very beginning.

Another significant finding was that schools that provided help for children needing it during school time scored much higher than schools that helped children during recess or before or after school.

A unique finding in the study involved class size. Very few studies have shown any relationship at all between class size and achievement, but in this study thirty-five was definitely the cut-off point for achievement. When classes averaged over thirty-five there was a dramatic and significant drop in reading comprehension scores.

**No "basal reader approach."** Another finding in this study exploded the theory that there is such a thing as "a basal reader approach." So frequently in the literature we find reference to "the basal reader approach" as though all
basal series represent the same approach. Our data give no support to such a theory. We found differences among groups using different basal readers to be significant at the .01 level. In other words, when we grouped together the schools using one basal series and the schools using another basal series, etc., there were great differences in their scores. We can't say that any one series represents them all. Each series is really an approach in itself. Since this class entered first grade in 1962, most of the schools were using one of the fifties' editions. Therefore, no evaluation of current editions can be made on the basis of these findings. The important thing to note is that different series can vary greatly in their effectiveness. We also found that schools that had several supplementary readers available scored much higher than schools having only the basal reader.

Implications for Research

The findings on the data analysis in this study are useful to us at both state and local levels for planning and program development. But, of far greater usefulness are the implications this study has for the future of reading research on a national scale.

This type of research is not experimentation; it is assessment. One characteristic of assessment is that data are collected after the treatments are over. No random assignment of treatments is possible and, therefore, the
findings are not generalizable to other groups. Another is that activities are limited to an evaluation of programs already in operation. It provides no vehicle for trying out innovations. Therefore, assessment cannot replace experimentation. But, it can provide a structure within which experimentation can be more meaningfully planned, conducted, and interpreted.

A proposed structure. This proposed structure for research would begin with an assessment to provide base-line data on programs in operation and to divide all schools into cell populations that could be described. For example, all schools that admit first graders at five years, eight months would comprise one cell population. The schools admitting children at five years, nine months would be another cell population, etc. Cell populations could also be set out in factorial arrangements. For example, envision entrance age on the vertical scale of a table and synthetic and analytic phonics on the horizontal scale. Now each school is assigned a cell on these two bases. The value of laying out cell populations is that sample studies can be done in the cells with no question about the population to which the findings can be generalized. To this point, the over-generalization of research findings is one of our big problems in reading research.

A second use for assessment in this structure for research would be to cross-validate the findings of experimentation since these two types of research have different sources of
bias or error. In an experiment, the teacher may feel he is playing a special role. He may feel that he is representing his school, a publishing company, or the whole teaching profession. We don't know. The students may feel like guinea pigs; the new materials may seem more interesting; the environment may be charged with excitement. These contribute to what is known as the Hawthorne effect and may inflate scores. This is not a problem in assessment. On the other hand, accurate history may be a problem in assessment but it can be easily handled in an experiment. Size may be a problem in an experiment but large assessment studies can be done. They differ in many other ways also and their different methodological strengths and weaknesses make it possible for researchers to supplement and cross validate findings through the use of both types of studies.

A locus for assessment. A logical choice of agency for the conduct of assessment studies would be the State Department of Education. They have the legal basis, the personnel, the knowledge of programs in the state, and the trust of the local administrators necessary to make this type of research meaningful. A sharing of information across state boundaries would shed some light on aspects of the reading program related to achievement.

If we are to find answers to some of our major problems in reading, a whole new structure for research is needed. Assessment can provide that structure.