AN EXPERIMENTAL STUDY OF THE READING PROGRAM OF AN ELEMENTARY SCHOOL IN AN AGRICULTURAL COMMUNITY OF CENTRAL ARIZONA

by

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TABLE OF CONTENTS

INTRODUCTION

Statement of the Problem. .......... .......... 1  
Orientation. .......... .......... 1  
Definition and Delimitation. .......... 2  

CHAPTER I - THE PRELIMINARY SURVEY. .......... 4  
The Previous School Situation. .......... 4  
The Background of the School Population. .......... 6  

CHAPTER II - THE EXPERIMENT. .......... 17  
Preparation of the Personnel. .......... 17  
Planning a New Program. .......... 22  

CHAPTER III - THE PROGRAM AS ADOPTED. .......... 26  
Statement of Policy. .......... 26  
Organization of the Program. .......... 31  
Objectives and Materials for Each Level. .......... 34  

CHAPTER IV - THE PROGRAM IN OPERATION. .......... 49  
Testing the Program. .......... 49  
Analysis of the Test Scores. .......... 50  

CHAPTER V - CONCLUSION AND SUMMARY. .......... 61  

CHAPTER VI - BIBLIOGRAPHY I. .......... 63  

CHAPTER VII - BIBLIOGRAPHY II (Annotated). .......... 66  

APPENDIX. .......... 71
INTRODUCTION

Statement Of The Problem

The writer has attempted to investigate the causes for the low reading ability of the pupils of this school district. These causes have been sought in the reading program of the school and in the background of the pupils. The problem to be considered is, can the special needs of these pupils be discovered, and can a reading program be devised which will meet these needs and enable the pupils to attain more adequate reading ability?

ORIENTATION

In an informal conference of ten principals of school districts in neighboring parts of Maricopa County, Arizona, in April 1948, some general statements were made, and agreed to be common to all ten districts. These statements were taken down as follows, by the writer who was present:

1. The children of these schools show a frequency curve extremely skewed to the right on all used standardized Reading tests, indicating great preponderance of very low scores.

2. There are complaints from the High Schools that 25 - 30% of the eighth grade graduates entering from local feeder schools cannot read sufficiently well to study their High School assignments.

3. Practically every grade teacher finds that 25 - 30% of the pupils promoted to her room do not meet the Reading requirements to begin at her grade level, according to the established curriculum in her school, based on the State Course of Study and adopted tests.
4. Parents complain that the children do not read the usual children's classics for enjoyment nor books as aids to hobbies, thus missing the opportunity for broadening their interests and activities outside of school.

5. Employers complain that school-leavers and graduates lack sufficient reading ability to make them trainable in many kinds of jobs.

6. The pupils themselves find that reading is difficult and distasteful, and incline to resent that more help was not given them in a "hard" subject.

It is not unreasonable to assume that these statements gave a general picture of an unsatisfactory reading situation in this area. The writer became interested in studying this condition as it appeared in Peoria, Arizona, one of these districts that was considered to be typical. The purpose was to find the causes of this low reading ability and to devise a plan for a more effective reading program. This thesis is the result of this study.

**Definition and Delimitation**

The district chosen for this study is considered typical of the districts in that area, in the make-up of its population and the nature of its social and economic activities. The average divisions of its population are: about 25% migrant labor, living in camps; about 25% resident labor, living in marginal economic circumstances; about 25% Mexican labor, both immigrant and marginal resident;
about 20% residents of adequate income level; about 5% residents of professional and cultural background. 85% of these people are actually employed in commercial agriculture: large-scale cotton and vegetable farming, and 15% are in service occupations: storekeepers, auto mechanics, gas station operators, route-delivery-men, whose income depends on supplying these people locally.

The writer has lived and worked in this and neighboring districts for ten years previous to this study, as well as during the two years of this school experiment, and has taken every reasonable opportunity to become acquainted with the essential nature of its people and their ways of living. A further analysis of this will be necessary in looking for the answer to our first question as stated. Therefore, a description of the main features of each population group of this district will be given later.

There have been one hundred and twenty books, periodicals and manuals consulted for this work and only the most pertinent will be mentioned in the Bibliography. This will be divided into two parts: Part I will contain the materials actually quoted in this text, and Part II will contain those that have been very useful, with a brief description of its contribution to this study.

Materials used in the Reading Program which were devised or adapted by us, will be found in the Appendix, each with a brief indication of its usefulness.
CHAPTER I

THE PRELIMINARY SURVEY

The Previous School Situation

According to the deed-block-books of the Maricopa County Assessor's office for 1939-49 most of the land of this district had been owned until that time by six large-scale agricultural interests or individuals. A study of the school district records for the same years shows that these individuals or their representatives had rotated rather continuously as members of the School Board. Informal interviews had brought out their defense of this practice as justified because they were the largest district tax-payers and were responsible for the presence of the labor population. However, these personal interviews had also brought out the facts that none of these individuals had any background of professional educational philosophy or administration and in most cases were themselves the products of the rural one-room schools which according to the Maricopa County School records in the office of the County School Superintendent were predominant in this area in the last generation. They had an average high school education of about two years. Their expressed main policy had been "to keep the district school-tax down": the yearly school board election platform before 1949 had been "No Special Services".

The elementary school, for the years 1946-49 had an average enrollment of 750 pupils, an A.D.A. of 650, through the eight grades, and 23 teachers. However, the classroom registers showed temporary increases and decreases of 20-30% during the harvesting and picking
months, due to the seasonal influx of migrant "stoop labor". In 1948-49, the district school-tax was $3.14 per $100 of assessed property valuation. The district share of the cost per pupil per year was $175 according to the published school budget for that year.

Most of the time, up to about 1949, the School Board had considered itself the school-policy maker. It had hired the Superintendent and Principal on one-year contracts, and had dictated their policies directly. In the years 1939-49 not one administrator had stayed longer than two years.

A rather significant factor in this district was the power of the older teachers. Seventeen of the twenty-three were local property owners, and had a tenure of from 12 to 26 years in the district. Most of them were relatives or friends of the families of the school board group. These ladies were very articulate, and had often decided the fate of the principals and superintendents. They had also been divided amongst themselves, into at least three groups, as the writer had observed, who did not eat with, speak to, or cooperate with each other. There was a long history of petty grievances which made them immediately oppose each other's school policies. The half-dozen newer teachers had been, typically, girls just out of college, who had taken jobs here to get experience, and had soon moved on, too discouraged or indifferent to withstand the domineering of the older "permanent" teachers.

Thus, there had been no professional philosophy nor consistent general policy built up on any phase of the school's program. The salary scale had been about the same as in neighboring districts, but with more value placed on tenure within the district, than on
preparation, recent study, or experience elsewhere.

The Background Of The School Population

One of the largest groups contributing to the school population was that of the migrant labor families. These people earned their living following the seasons of the cotton and vegetable harvests throughout the southwest. They stayed in this district from two weeks to three months, depending on the work available. The school attendance-officer kept track of their arrivals at the labor camps, and as deputy sheriff he saw that the children were sent to school, and arranged for the school bus drivers to transport them. They were housed by the ranch owners or labor contractors in tents and barracks camps. A rather full description of this living condition is in order here, as later we shall seek to show that it was a contributory factor to the causes of low reading ability. According to a report of Dr. Clarence Salisbury, Chief Director of Preventative Medicine for the State Department of Public Health, which was published in the Arizona Republic, November 12, 1950, p. 1, these were the conditions found in typical labor camps in this area:

Entire families living in unfloored tents without sanitary facilities. Flies buzzing in and out of open-pit privies located a few feet from where hundreds of people prepare and eat food.

Illness was everywhere. Venereal disease, dysentery, impetigo, and conjunctivitis are common.

Chickens wandered in and out of tent homes, roosting on filthy beds, spotting vermin infested blankets with their droppings.

Families of nine and more persons attempting to live and bring up children in one-room shacks without plumbing, heating or sanitation.

In one such shack – a 10 by 12-foot hut – a woman lay in semi-coma on a dirty bed while her seven young children played in the filth and litter of their surroundings. Neighbors said she had not left her bed for three months. During that period, they added, her children have eaten discarded food scraps to stay alive. They were so filthy that the original colors of their clothes could not be distinguished.

'We try to help them when we can,' a neighbor mother said, 'but she is delirious most of the time and makes the children bar the door. Her husband does nothing about it. She will soon die, I think.'

We saw 140 carrot pickers drinking water from a garbage can in the field while they were working. Two coffee cans served the entire crew as dippers.

We saw the pitiful attempt of a few camp tenants to keep themselves clean. They had rigged a makeshift shower—directly over the source of their drinking water.

Garbage is often tossed in the most convenient direction, to land and rot as chance dictates. Some camps supply garbage containers, but many are not covered. Clouds of flies hover over them.

These and similar shocking conditions are causing mounting concern among public health officials. They point out that, unlike most substandard health and living conditions, Pinal county's problems have not been produced by poverty. Cotton pickers earn from $15 to $18 daily; vegetable pickers average from $10 to $13. In most worker families three or more persons are employed.

Nor are Pinal's problems entirely the fault of farm owners and the labor contractors who supply them with workers. The majority of these men do their best to supply minimum living and sanitation facilities for migrant laborers.

There are exceptions, of course, but inspections indicate that most landowners and labor suppliers are attempting to do their best under trying circumstances.

Labor camp conditions can be licked only through 'vigilance and education'.
Unless we can get at this thing quickly and educate those involved in methods of preventing such conditions in the future, it may get completely out of hand.

The problem goes far beyond the necessity for immediately cleaning up these camps. The human element is our toughest assignment. Many living in these camps are migrant workers who have never known anything but substandard living and sanitation. They must be educated to the hazards which they and their neighbors face if any long-term progress is to be made.

For example, more people are sick right now in a camp where the camp operator has tried to provide adequate sanitary facilities than at any other location we have visited. The workers just will not co-operate in keeping toilets clean and flies are spreading disease. You can't blame the camp operator for that.

As there is no control over the migrations of these workers, when the family left this district, there was no means of checking whether the children were entered in a school at their next stop. Often when they returned here, after being in another state for several months, it was found that they had not been in school in the meanwhile, so there was much loss of school-time.

Another large group contributing to the school population was that of the resident field laborers. In the main, they were some of the migrant workers who had decided to stay in one place on the chance of more permanent local work. A number of these were kept employed by the ranchers at maintenance work during most of the year. They lived in small colonies outside of the town, on land which they did not own or rent: desert or dry river bottoms, on which they took "squatter's right" until advancing agricultural grubbing-out or a flash-flood swollen river, forced them to move on. Their housing was temporary, built mostly of scraps and junk material around old car bodies or
trailer boxes. Water supply, light, heating, sanitation, and storm protection were quite insufficient.

The cultural, economic, and health conditions of this group were very low, and these children too were found to be inadequate to the school curriculum situation. Their attitude toward authority in general and the school in particular was antagonistic. Sheriff's deputies and probation officers were frequent visitors. From personal observations and acquaintance, these people were found to be mainly the second generation of the farmers who were forced out of the "dust bowl" area in the '30s; a migrant generation that grew up in the insecurity of food and shelter, with no decencies of living environment and against the antagonism of most of the localities in which they lived. Their attitude was not unexplainable, but it hardly leads to cultural or literary interests for themselves or for their children. Their economic condition fluctuated with the field seasons, and as they were not under the protection of any department of government, medical and financial aid was difficult to obtain.

The next major population group to be taken into consideration was the Spanish-American. In this district these people lived in rather dilapidated cabins, provided by the land-owners, along the banks of irrigation ditches, and the edges of the fields. Here, too, water, sanitation, heating, lighting, and wind protection were at the barest minimum. From frequent visits to these homes, the writer observed that the language spoken was Mexican-Spanish, and the manner of household and family relationship was most crude. They lacked the customary formalities and religious traditions of Mexican agricultural workers in
their native setting.

At the times of peak employment of field labor, relatives and friends of these people came up from Mexico on temporary federal labor permits, bringing into the school "visiting" children of all ages who could not speak or understand English. Their health and cleanliness had to be challenged by the school health authority, and they created a problem in grade placement for the administration, and in room discipline for the teachers who had become discouraged at giving them special coaching help, since the length of their stay was so unpredictable. These children were bewildered and unhappy in spite of the school's effort to make them comfortable during their stay, and there had been no teaching situation devised for their needs.

The economic condition of the resident Spanish-American group also followed the crop season, but since they were legal residents of the county, they could appeal to county welfare agencies in time of need.

The most stable group was that of the local residents of adequate income level. These were the families of men employed as farm managers, labor bosses, carpenters, mechanics, storekeepers, and service workers in the small cross-roads shopping center. These people owned or rented modest homes, and had a low, but steady income, living a more typical simple American community life. Upon acquaintance, these people were found to be the second and third generation of farm families who came from the east to build new farms in this part of the country, and have "settled in" more permanently. They expected the school to provide at least the traditional "3 R's" education for their children, and hoped to see them graduate from high school.
The smallest group in this district was that of the few people with professional and college education; the doctors, ministers, nurses and teachers. In such a community their income could not be high, but they were there for the needs of these people, and they expected the school to provide every possible opportunity for education for their children, and insisted on preparation for higher education.

It is very evidently not too far afield to set the tone of the answers to our first main question, by referring to the theme of Dr. Norbert Wiener in his recent book, "The Human Use of Human Beings", in which he holds that the philosophy of society can be held responsible for the development or degradation of the individual.

Our view of society differs from the ideal society which is held by many Fascists, Strong Men in Business, and Government. Similar men of ambition for power are not entirely unknown in the scientific and educational institutions. Such people prefer an organization in which all orders come from above, and none return. The human beings under them have been reduced to the level of effectors for a supposedly higher nervous organism. I wish to devote this book to a protest against this inhuman use of human beings; for in my mind, any use of a human being in which less is demanded of him and less attributed to him than his full status is a degradation and a waste. It is a degradation to a human being to chain him to an oar and use him as a source of power; but it is an almost equal degradation to assign him a purely repetitive task in a factory, which demands less than a millionth of his brain capacity. It is simpler to

organize a factory or galley which uses individual human beings for a trivial fraction of their worth than it is to provide a world in which they can grow to their full stature. Those who suffer from a power complex find the mechanization of man a simple way to realize their ambitions. I say, that this easy path to power is in fact not only a rejection of everything that I consider to be of moral worth in the human race, but also a rejection of our now tenuous opportunities for a considerable period of human survival.

Where better than in the work of the agricultural field laborer, can we find an example of men being used as mere effectors in an organized system? This is actually proved when they are finally replaced by machines, which are found to be cheaper and more efficient. The figures of the local ginning company show that forty mechanical cotton pickers would replace the work of fifty hand pickers each, or a total of 2,000 workers. The cost per bale hand picked is $45.00 and machine picked is $15.00. The average amount picked per machine per day is eight bales. At a saving of $30.00 a bale, the total average cost of machine picking would be $240.00 a day less than the cost of hand labor.

The people who are still working as "stoop labor", and living in the conditions already described, are not in the position to develop to their fullest potentialities.

Physiology and psychology teach us that the mechanics of human intelligence is in the functioning of the higher nervous system, the foundation of association patterns in the nerve endings of the brain areas, and that these are strengthened by use. Conversely, how

then can intelligence be highly developed in an individual if there is no stimulation from his environment to initiate the formation of these patterns; if the fatigue toxins of manual labor tend to obliterate any patterns formed, and the emotional insecurity of such a life tends to block the reasonable use of any that have persisted?\textsuperscript{1,2,3} It is not hard to understand why these people are stupid and careless, as Dr. Salsbury has pointed out.

Anthropology gives us a clue:

\textsuperscript{4} The assumption in the attitude of the majority of psychologists, is that drives are inborn, and that the structure of society has developed as a vehicle of expression of these innate tendencies. The great contribution of cultural anthropology, now gradually seeping into sociology but almost neglected still by psychology, lies in its demonstration that social systems are not determined by human drives; rather that social systems control the expression of drives, and may perhaps determine the existence or nonexistence of such drives. To put this change in viewpoint into a nutshell, we may phrase it as follows: psychologists have said that social systems depend on human nature; anthropologists reply that human nature depends on the social system.

It is even possible that, following studies by Dr. Allison Davis, we might find not only that they are cotton pickers because that is all they can be, but perhaps that is all they can be, because they are cotton pickers. To quote from Dr. Davis:

\begin{itemize}
\item[-] 1 Frederick Lund, \textit{Emotions}, p. 195.
\item[-] 2 \textit{Ibid.}, p. 373
\item[-] 4 Ross Stagner, \textit{Psychology of Personality}, p. 260.
\end{itemize}
The committee which is planning the 1950 White House Conference on Children has emphasized that one of the major wastes of the human resources of the United States is our failure to develop at all fully the potential mental ability of the sixty per cent of our pupils who come from the lower socio-economic groups. Half the ability of this country goes down the drain, owing to (a) the failure of intelligence tests to measure the real mental ability of the children from the lower socio-economic groups, and (b) the failure of the schools to recognize and train this ability. More than sixty per cent of all children in this country are from families of working men. While a great part of the ability of these children will be lost to this nation, industry, business and the Armed Services will be urgently needing more able people.

This country cannot survive as a leading world power, unless we learn how to discover, recruit, and train more of the brains in the lower-income groups. If we do not find more of the people with quick minds and native-ability in the great reservoir of the lower-income groups of the United States, (I am not talking of racial groups, but of income groups of all colors) we shall not be able to compete with the vast populations of western Europe or Asia. There is only one way to get the increasing number of highly skilled, white-collar and administrative personnel we must have. If our society is to increase its strength, we need to recruit ability of all kinds from the lower socio-economic groups. When any nation stops this recruiting or slows it down through the failure to discover the able but poor children, and to develop their abilities, that nation starts to decline and die. There have been no exceptions to this rule in the history of modern nations.

The same need that our society faces in respect to skilled workers, and which would become acute in another war, also exists in respect to white-collar workers, teachers, engineers and executives. We have far from enough able people in many of these fields. To get them,

we have to discover and train much more of the real ability which exists in the largest part of our population, namely the lower socio-economic group.

A modern nation either continues to grow, or begins slowly to decline. A nation begins to die at the brain, when it wastes or fails to develop the ability and skills of its masses. We need all the able people we can find. To find them, we must have a way to measure their real, innate intelligence, no matter how poor their environment has been. They have to be discovered in childhood, in their first years in school. That is why new tests of real, native intelligence are essential. A democracy is a place where ability is discovered and recruited in all groups, and given a fair chance to go to the top, for the benefit of the nation—of this nation, which is the last best hope of man.

This is not away from the subject of reading ability, for it is now more possible to understand the statement of Dr. Russell, "Reading is not so much getting ideas from the printed page, as bringing ideas to the printed page; if there is no background of experience and concepts, the words even if learned and pronounced, have no meaning."¹ "These days the 'frontier' is in human relationships; if teaching children is to include studying them, the job takes on significance."²

Therefore, we have come back to the answer to our first main question. It may be summed up as follows:

I. The causes for low reading ability that lie in the background of the pupils are:

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1. The lack of suitable experiences to form concepts and bring meaning to work met in the school situation.

2. General emotional and nervous instability due to social and economic insecurity.

3. Loss of schooling through frequent migration to follow the labor market.

4. Family attitude of indifference to the efforts of the school.

5. Habit of antagonism to authority in general, to the school in this case.

6. Living conditions that do not afford adequate nourishment, rest, or medical care.

7. The language handicap of pupils from Spanish-speaking families.

8. Lack of cultured tradition or ambition, in the home situation.

II. The causes that lie in the previous school program:

1. The lack of organized study of the needs of the different groups of pupils.

2. Lack of a definite policy on classification of pupils, grade placement, and grouping.

3. Inconsistent policy on "social" promotion and grading, and reporting to parents.

4. Lack of adjustment situation for correct placing of migrant pupils in the Reading groups.

5. Lack of cooperation and security among the staff and administration.

6. Previous lack of a professional school philosophy among the school-board candidates.

7. Lack of understanding of school purposes and problems by the community.
CHAPTER II

THE EXPERIMENT

Preparation of Personnel

In the first chapter, a general picture was given of the attitudes prevailing prior to the school year 1949-50 in this district. It self-evidently was not a situation where a consistent and progressive educational philosophy might be found, nor where the needs of the school population were relatively obvious and homogeneous.

Therefore it can be seen that before our second main question could be answered, some preparation had to be made. The antagonistic groups had to be brought to modify their attitudes of their own volition, and to develop a group interest to study the reading needs of the school population, and to devise a reading program to meet these needs. Thus the first step in the experiment was the psychological preparation of the groups involved.

The actual point of attack was almost imperceptible. The writer was introduced as Remedial supervisor to referee in the conflicting programs of the teachers, and to take over personally the pupils in all grades who were having difficulty in reading, or were not up to grade according to the requirements of the State Course of Study and adopted textbooks.

In choosing the cases for remedial help, the question immediately arose as to whether these children were hampered by low mentality, foreign language handicap, immaturity, loss of school time, inadequate teaching, insufficient experience, or lack of conceptual background,
indifferent attitude, or emotional block. In defense of their own difficulties and lack of success, the teachers became very much interested in these questions. The many informal conferences resulted in the inauguration of a program of diagnostic testing.

The first need was held to be for a test of comparative mental ability. In September, the Otis Quick-Scoring Mental Ability Tests, Alpha and Beta forms, were given to the entire school, and graded by the supervisor. Each teacher was given a ranked list of the scores of her pupils, and she added to it notes from her own knowledge of the individuals. Later in September, the Durrell-Sullivan Reading Capacity test was given to Grades II through VII, and the Lee-Clark Readiness test was given in December to Grade I. The scores for each class were listed next to the IQ scores for each pupil to show if there was any relationship.

Then each teacher had a conference with the supervisor to decide which of the difficult-reader pupils she could continue to work with in her regular class situation, and which were to have individual remedial help for their special handicaps.

From the records kept, it was found that 220 of the 540 tested were below grade, and 123 of these were chosen as needing, at least temporarily, the remedial help. Each of the 220 below grade pupils was given an informal diagnostic inventory (see Appendix) by the supervisor. From this the weak points to be aided could be discovered, or the process the child was using as reason for error in his thinking could be ascertained.

A complete physical check-up by the school nurse was given, to
disclose possible physical handicaps. Where any health needs were found, they were reported to the families and followed up by the school nurse and supervisor.

The 123 cases chosen for remedial help were found, as seen in the same record, to have difficulties apparently from the following causes, some of them rather directly traceable to the child's background, some to the school's previous inadequacy.

(An interesting observation was made, incidentally, that might be of interest for further contributive study: These reading difficulties tended to "run" in families. Of the 123 with greatest difficulties, 78 were siblings with similar handicaps.)

I. Difficulties traceable to inherent causes or background:

1. Low mentality; mongolianism, cretinism.
2. Lack of visual perception; lack of fusion, muscular imbalance.
3. Lack of auditory perception.
4. Mixed dominance between handedness and eyedness causing letter confusions and reversals.
5. Glandular disorders, causing extreme lethargy, or nervousness.¹
6. Agnosia, defined by Woodworth, "can still see word, but cannot utilize sensory data as sign of objective fact; injury to or underdevelopment of auditory or visual area of cerebral cortex."²
7. Chronic asthma or sinusitis, causing constant toxic condition.
8. Cerebral palsy or polio, causing lack of muscular control and periods of loss of attention.
9. Physical deformities; cleft palate, injured larynx, deformed head.
10. Malnutrition, causing indifference or lassitude.

¹ Robert S. Woodworth, Psychology, p. 213.
² Ibid., p. 110.
11. Nerve disorders, causing speech defects as stammering,
12. Babyishness, from emotional instability.
13. Language handicap from Mexican homes.
14. Emotional instability from vicious background.
15. Emotional block from fear or lack of self security.
16. Indifference or antagonism due to family attitude toward school authority.

II. Difficulties traceable to previous inadequate program of the school:

1. Mental immaturity for the grade in which placed.
2. Frustration due to pressure of material too difficult.
3. Lack of attention and retention, because of material outside of experience or concepts.
4. Withdrawal due to need of motivation.
5. Inability to make decisions on handedness and eyedness because of placement at frustration level.
6. Lack of eye-voice span because of lack of sight word familiarity.
7. Too many eye fixations and regressions due to unsuitable material.
8. No knowledge of structural or phonetic attack clues.

The kind of help needed by each pupil was planned by the supervisor, and these children were grouped by the similarity of help to be given, so that some of it might be done by her in group work, and supplemented by individual attention.

A list of materials and equipment for this remedial work is given here to show that it was an inexpensive budget item.

1. Complete set of Dolch "Aids to Reading" games $8.00
2. Gates and Peardon Diagnostic workbooks 11.00
3. Brueckner's Remedial exercise books 10.00
4. Tagboard for "wheel" devices 1.00
5. Phonics drill device 1.75
6. Picture-dictionary, Walters & Curtis 2.50

$34.25

The remainder of the materials were regular school equipment of graded texts, word cards, and library books.

The general method of the remedial work was to find the child's
basic level, and reteach as slowly as necessary, with individual
treatment to overcome each child's special handicap.

The arrangements needed for this phase, led to the next step in
preparation of attitudes for the experiment. The administration was
consulted to plan time for these children to be out of their regular
classrooms, and to find facilities and supplies for this specialized
instruction. The expense item for tests and equipment brought the new
study to the attention of the school board, and after explanation and
discussion with the supervisor and administrator, its defense was
accepted.

Next, this new testing, and the schedule for the remedial work
aroused the interests of the parents, many of whom came to school to
question and discuss it with the supervisor and teachers. In this way
the P. T. A. was sufficiently interested to devote an evening meeting
to explanation of the study, by the administrators, and the needs for
a further program.

Thus, shortly after the outset, the preparation of the attitudes
of all groups involved was made. All became definitely aware of the
differing problems of the various population groups and the
responsibilities of the school to meet them. It was observed that the
children relaxed in the relief of pressure from unsuitable placement
and fear of failure. The teachers, relieved of the load of their
most difficult pupils, expressed themselves as being able to group
their classrooms according to reading needs and enrich their work for
the interests of the quick-learners.

In February, 1950, the second part of the Durrell-Sullivan
Reading test was given to Grades II through VII, and in April the Durrell-Sullivan Capacity test was given to the First Grade. The results showed 102 of the children failed to place at their grade level, as compared with 200 at the time of the September test.

Of great interest to the district school-tax payers were the following figures:

The district share of the school budget in 1949-50 was $114,026, and the A.D.A. was 645, making a cost per pupil per year of $175. The previous year 200 pupils were retarded, this year 102, or a total of 98 fewer. At $175 cost per pupil, this was a possible saving of $17,250, to the district budget. The main expense was the supervisor's salary of $3,000, leaving a total saving of $14,750 possible for the following year.

**Planning A New Program**

Evidences of the improvement accomplished in the first six months encouraged the attitude of mutual interest among the teachers, and stimulated suggestions as to how more improvement could be made. While this feeling was high, a staff meeting was held, to discuss suggestions for the future program of reading. The typical problems presented by the teachers are listed:

1. Each classroom contained pupils of many different degrees of reading ability, so that when grouped by reading needs, more groups were formed than could be efficiently handled by one teacher.
2. The great number of children of the migrant labor families entered school late in the term, or left during the term and returned several months later, so that they could seldom be fitted into the groups which were established at the beginning of the term.

3. Children thus retarded, and needing individual attention, could not be given the necessary time by the teacher who had four or more groups.

4. Grouping according to reading difficulties resulted in segregating the Spanish-American children as these all had the same language handicap, thereby undoing the effort of the school to integrate these children into the school population.

5. Pupils who were retarded had to continue to work in the same textbook as before, or repeat a familiar one, as there were few sets of Readers at each grade level, and not much additional material for those who learned quickly and required more to hold their interest.

6. There was no reading material of simple vocabulary but mature interest level, for the older pupils who were slow in reading.

7. Under the system whereby pupils were classified into rooms according to their supposed "brightness", based on previous school record, it was difficult to do very stimulating project work in the low score rooms because of their limited reading, writing, and general associative powers.

8. The children from the labor camps and Mexican settlements had so little of suitable conceptual background, that even when taught to pronounce fluently, they got little meaning from the printed page.

9. Under the system of "social promotion" many pupils got as far as grade VIII, without means to master required subject matter, and could only "sit through" classes as "unteachables", creating a disciplinary problem as well as mitigating the value of promotion and graduation for the other pupils.

10. The general tendency to make all learning attractive so "sugar-coated" the process that certain types of pupils felt no need to make an effort on their own part to avoid failure.

11. So much stress has been put lately on "sight" reading that the pupils had inadequate phonics-tools to attack new words.

12. Funny books, radio stories, movies and television have replaced reading as a hobby, without offering the more elevating concepts and appreciation that poetry and literature can attain.
13. Dependence upon a remedial class to get pupils up to grade is a "crutch", and shows weakness in the "first-teaching"; the recent tendency is to get away from this need except for special disability "clinic" cases.

14. Schools in other places were developing an organization of the reading program known as the "levels" system. Could we study these to see if this might be adapted to our problems?

As the teachers expressed their problems and manifested various phases of interest, committees were suggested to study these problems, and to make recommendations for their solution. Each teacher was made a member of the particular committee in which she had an interest. The following committees were formed:

1. On the number of reading groups efficient in one room.
2. On how to place migrating children in reading groups.
3. On how to arrange for pupils who need individual attention.
4. On how to better integrate the Spanish-speaking pupils into the school population.
5. On how to get more varied texts at each level.
6. On how to get easy vocabulary reading material of interest to older pupils.
7. On whether room classifications should be on basis of homogeneous I.Q. scores.
8. On how to provide in school experience more suitable conceptual background for pupils having limited imaginative ability.
9. On how to provide in the seventh and eighth grades for those pupils who have come to that level only by "social promotion".
10. On how to avoid an attitude of lack of responsibility for effort, on the part of the pupils.
11. On the phonics essential in the Reading program, and when to introduce it.
12. On how to get pupils interested in reading the classic children's literature.
13. On visiting and studying the Reading programs of other schools, and the possible adaptation of these programs to use in this school.

The supervisor acted as chairman of this meeting and appointed the chairman of each study committee to form a council to coordinate the work of the thirteen committees. This council met each week with the supervisor and administrator, and reported the progress of the work of each committee, avoiding over-lapping of their studies, and organizing their findings into an integrated program.

At the time of the close of school in May, 1950, a plan had been worked out for a year's program of reading for the whole school. It incorporated possible solutions to each of the problems presented by the teachers. It attempted to overcome the weakness of the previous school program, but to keep its strong points. The separate findings of each study committee will not be listed, as they are all integrated into the new plan and will be apparent as this is presented.

At the final staff meeting of the school year, the plan in its entirety was presented to the staff for vote upon its adoption. It was unanimously received, as it was their own work, and plans were made for carrying it out in the next school year. Each teacher was then able to know what was expected of her, and what she could expect of the others. An atmosphere of satisfaction and cooperativeness was quite apparent.

It will be seen upon examination that this program offers few new elements. It is the adaptation of the newer plans and policies of elementary school organization to the needs of this type of school population and district situation.
CHAPTER III

THE PROGRAM AS ADOPTED

Statement of Policy

A reading program is not an isolated phase of a school's organization. It does not stand or fall on its own merits alone, but on how it fits into the general scheme and purpose of the school's work. It must be part of the philosophy of the school and community, and part of the activity and organization of the curriculum. It must contribute to the school's policy of progress through school and promotion, and reporting to the parents. Therefore, a reading program cannot be set up by a supervisor or principal. First, the whole staff must examine itself on its general philosophy of education, and built itself a guiding frame of reference for working together. Then the teachers who have the responsibility for the reading phase of the school's program can organize their work, so that each one understands what the other is doing; what to expect, and what is expected of herself. The essential sense of security which a teacher needs, is thus provided, and when things go wrong, the weak point can be traced and adjusted honestly.

1 Henry J. Otto, Elementary School Organization and Administration, p. 85.
2 Ward G. Reeder, Fundamentals of Public School Administration, p. 733.
3 Henry J. Otto, op. cit., p. 470.
4 Ibid., p. 85.
5 Ibid., p. 253.
To this end, the committees studied and visited and interviewed. They gathered information on how things were done better elsewhere, and how similar problems could be met. They read the very recent literature on trends in thinking and practice in various phases of Education, and together planned how these ideas could be adapted to the special situation in this school. They reached, cooperatively, a decision on a philosophy and course of action. It is stated here:

"Remedial work is much more difficult than the initial teaching, because not only must new habits be established, but undesirable ones must be broken. The goal toward which all schools should be working in the field of reading is, to teach it so efficiently in the primary grades, that pupils are prepared to do rapid and comprehensive reading in all subject-matter fields when they leave these grades, so that no remedial program is necessary. However, the same effective type of teaching should be continued in the upper grades to insure the attainment of the goal."

It is known that some causes for deficiencies are beyond the control of the school and the teacher. These may be physical handicaps of sight, hearing, speech, mental and emotional disturbances caused by unsatisfactory home conditions, and insecurity, fear of punishment and failure, irregular attendance due to mobility of the present day population, and indifference on the part of parents. Others, such as failure

to recognize nonreadiness for reading, unsuitable materials and methods, and failure to adapt the program to individual needs are definitely the fault of the school.

To overcome specific reading deficiencies, the first step is to discover existing difficulties through diagnostic tests and observation, and the second is to establish a sensible and well planned remedial program. Often it is difficult for the teacher to distinguish which are "retarded" and which are "remedial" cases; which cases are mentally retarded, and which are of normal or higher intelligence but still are poor readers and need some remedial instruction.¹ To determine this, mental tests are the scientific means although these should be supplemented by observation, a knowledge of the child's physical condition, play habits, muscular control and adjustment to social situations.

In furtherance of this philosophy, the Primary Department has set up in carefully graduated levels the main objectives and specific outcomes which are essential to successful participation in group life. For these coordinated levels, the materials of learning will be based upon the child's every day living. The interests and needs of the children will point to the method of learning, and the capacity for growth will determine the speed of progress.

So the Primary Department which was formerly set up as grades, is now set up as LEVELS 1, 2, 3, 4, 5 and 6. With Level 1 as the common starting point, and with the successful leaping of the so-called "fourth grade hurdles" as an achievement goal, large numbers of children of greatly differing native abilities in all stages of mental, social, and emotional development, from very different environments, and with a wide range of interests and tastes, will start on Level 1, and travel at varying rates of speed, along the successive levels until the goal has been reached.\(^1\) There may be rare instances in which a child who has shown very superior development in the four major types of growth may complete the work on all levels in 2 years. In most cases children will finish the work in 3 years. The average child who is often ill, or who is faced with social adjustment problems may take 4 years. In the case of the child who is a very slow learner, it may take 5 years.

However, regardless of the rate of speed one thing is assured each child. That is the right to progress successfully, instead of being high-pressured beyond his ability to achieve. It is better for a child to move slowly but continuously, establishing habits of success, than to be forced into habits of failure which will ultimately result

\(^1\) Hollis L. Caswell, *Education In the Elementary School*, p. 253.
in more or less serious maladjustment in the later grades.

According to Betts and others, the trend is to get away from remedial and opportunity classes, except for real clinic-type work with individuals. The tendency is to have all children together in a democratic life-situation. When grouping is to be done for convenience in handling, the main basis tends to be chronological age shaded by considerations of social and mental ability. It is advised to have some slow learners and some fast learners in with every average group.

On the subject of progress through school the trend of thinking seems to be based on substantial findings that non-promotion does more general harm than good. It also seems that the greatest good is served when all children are received into the school at approximately the age of six years, given a curriculum adapted to their individual needs and capacities, and allowed to progress at their own rate of maturity which is to be definitely measured and known by means of testing and studying each individual. He must understand what is expected of him and make an effort to meet these requirements. In this way there need be no failures, though that does not follow automatically but depends upon each teacher's insight and power of stimulation.

Each teacher will then understand that the pupils she receives, as

1 Emmet A. Betts, Foundations of Reading Instruction, p. 35.
3 Metropolitan School Study Council, 101 Patterns of Educational Practice, p. 18.
4 Henry J. Otto, Elementary School Organization and Administration, p. 85.
5 Louella Cole, op. cit., p. 87.
6 "Pupil Promotion Problems," Department of Superintendence, 9th Yearbook, p. 17-147.
7 Robert J. Havighurst, Developmental Tasks and Education, p. 1.
well as the pupils she sends on to the next teacher, will be at several
different grades of achievements; that she will have to study each child
carefully to direct his continuing development.

Curriculum content in this state is more or less based on the
course of study and adopted text books, but these can be analyzed and
sorted by degrees of difficulty, and used for each child as it fits his
stage of growth.

It becomes apparent now, that organizing a reading program is a
change more in attitude of people through this entire situation than
in the reorganization of the school curriculum. It means using the
same teachers, books, rooms, materials and equipment, but with a better
purpose and happier attitude each one understands his own and the other's
part in the scheme.

Organization of the Program

From the search into current educational writings and practice,
it is apparent that the plan usually referred to as "Primary Reading
Levels", actually has its elements already in the existing school
program, and needs mostly a change in emphasis and interpretation to
bring it to definition.

Betts and DeLong have both written of work in this line. 1, 2

1 Emmet A. Betts, The Prevention and Correction of Reading Difficulties,
p. 65.

2 Vaughn R. DeLong, "Primary Promotion by Reading Levels," Elementary
Schools in other areas are using it successfully, as it has been observed in operation. It can be made to apply to these problems and needs. The following procedure can be modified as needs and conditions change. This district so far has no local kindergarten fund, so the following outline pertains to the first three years of school.

1. All children in the first three grades would be grouped in a general Primary department.

2. All children in this group would be tested for reading capacity, achievement, and I.Q.

3. The test scores would be ranked and divided into six even segments, thus making six main levels equivalent to the first three grades: two levels to a grade. About 30 pupils would be assigned to each teacher from one level, depending on the number of pupils and teachers available. So that each room group would be roughly homogeneous in reading ability, pupils may be reassigned if advisable for reasons of physical, social, or mental maturity or a special type of retardation.

4. When the teacher receives her group, she would further subdivide it into 3 parts depending upon types of individual needs as she finds them. Each teacher would have flexible groups so that a new pupil could be placed accurately according to his ability at any time of entrance during the school year. This pupil may move from group to group, or to a higher level, at his own rate of progress.

5. The text books and teaching materials would also be ranked in order of their stages of development of a basic vocabulary, built scientifically on word lists by Gates, Wheeler-Howell, Horn, the International Kindergarten Union. This list would be divided into 6 segments corresponding (with some selectivity)

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to the six levels of development of the children for use by each of the six levels. As there would actually be 18 groups, the difference from one group to the next would not be very great so different books at very similar levels might be used, thus diversifying the material.

6. A child may start with one group at his present level of achievement and progress more rapidly than others in that group. He may then be transferred to the next group in that level, or on to the next level. However, if his reading progress is too fast for his other phases of development he stays with his level, but is given more and enriched material there, thus preventing social or age maladjustment.

7. If a child does not progress with his group when they finish, he is reassigned to another group at the same level, but with different materials. Thus he does not have to repeat the same material. Sense of failure is avoided, though the teacher should point out to the child when he is not doing as well as his capacity allows. In this case effort would be made to help him make his own adjustment by remedial methods if necessary, to get him over the hump, but not for a protracted time.

8. If at 4th, 5th, and 6th levels this disability persists beyond the teacher's controls, special psychological tests and medical examinations should be given and clinical treatment provided by the trained supervisor. In this way children can progress in an orderly, carefully observed and adjusted manner through the first three years to the critical point of the 4th grade, with the difficulties of that point in the minds of the teachers and all preparation made for it.

9. This plan offers nothing radical. The teachers may use, as teachers always have and always will, their own personal adaptation of methods they have learned, and the usual materials they have become familiar with. Any innovations they wish to employ they would probably bring in under any other system. The grouping is not different from the natural ones any class falls into.

10. An attractive feature of the smaller groups is that no large sets of textbooks have to be used over and over again, but preferably two or three smaller sets of different books, to insure diversity of material at the same capacity level, and to avoid repetition of material for the children who do not go on to the next level.

11. In case of retarding a pupil in one group, he repeats one-sixth of the year's work instead of the whole grade.

12. There is no point at which the financing differs from the financing under the standard three grades plan. In fact, in
percentage of retardations avoided, the tax money saved in
cost per year of pupils is much greater than the salary paid
to the supervisor who is also examiner and clinic teacher.
Expensive equipment, such as a telebinocular, tachistoscope,
ophthalmoscope, or audiometer, may be helpful, but are by no
means a necessity and can be supplied optionally by P. T. A.
or Kiwanis, if they want to do something special. Some very
inexpensive games and devices, and attractive graded story
books are the chief requirements. (See appendix.)

13. In reporting to parents, the teachers consider the form
included in the Appendix to be adequate. Parents often
insist on definite marks, as that is what they best under­
stand. However, they can easily be led to understand the
greater significance of a development report. The proposed
report card explains the grades on the levels plan. The
appendix includes a bulletin to parents to be sent to each
family.

14. For transferring a child to another school which does not
use the levels arrangement, a simple form can be mimeographed,
explaining the "levels" grouping, and stating definitely what
the child has done in terms of conventional curriculum material.
A proposed form is given in the appendix.

Objectives And Materials For Each Level

In order to supply a definite guide for the teachers of each level,
we have organized our objectives, desired outcomes, and materials accord­
ning to the following form, similar to the one used by the Madison School
in Phoenix:

Levels 1 and 2

MAIN OBJECTIVES

1. Initial reading readiness developed.

2  Wm. L. Wrinkle, Improving Marking and Reporting Practices, p. 3 - 115.
2. Foundations of ear-training program established.
3. Introduction to reading as a thought getting process through experiential reading charts, bulletins, and culminating in simple pre-primer reading.
4. Development of meaningful number concepts, with carefully planned experiences with number pictures and concrete number materials.
5. Wholesome attitude toward school, work, teacher, and playmates.
6. Habit of success established.

SPECIFIC OUTCOMES DESIRED

1. Satisfactory adjustment to the break in the home relationship.
2. Satisfactory adjustment to the school routine.
3. Rapport established between child and teacher.
4. Rapport established between child and group.
5. Ability to concentrate for at least 15 minute intervals.¹
6. Ability to listen to, and to derive thought content from what is read or told.
7. Ability to listen to instructions, and then to follow through without a repetition of the instructions to a solution of the problem.
8. Ability to stick to a job within his capacity until it is finished.
9. Ability to see likenesses and differences in objects.
10. Ability to see likenesses and differences in groups of objects.
11. Ability to see likenesses and differences in letters.
12. Ability to see likenesses and differences in words.
13. Ability to hear likenesses and differences in sounds.
14. Ability to interpret the story told by a picture.
15. Ability to interpret the story told by a picture.
16. Ability to tell a story by means of a picture or pictures.
17. Ability to interpret ideas in sequence by means of serial pictures.
18. Ability to reproduce a story verbally, with the guidance of sequential questions.
19. Ability to dramatize simple stories.
20. Ability to make up original stories.
21. Ability to draw original picture stories.
22. Ability to use manipulative materials with success and satisfaction.
23. Ability to conform to the group standard of acceptable conduct.
24. Ability to recall and to reproduce the outline forms of simple objects.
25. A respect for books.
26. A desire to read.

Level 2 Only

27. Ability to discriminate between similar and different forms, words, and sentences.
28. Ability to proceed automatically from left to right when observing words in a sentence.
29. An increase in the desire to read, and a realization of the purpose of reading.
30. Introduction to actual reading practice through the medium of experience stories written on the board or on charts.
31. Development through the use of experience stories the basic meaning vocabulary necessary for later reading of pre-primer stories.
32. Development through experience stories a sight vocabulary of the basic 50 words will enable the child to read successfully the Pre-Primers, "Happy Days," "The Little Road," and "Who Knows."%
33. Successful oral reading of the above named Pre-Primers.
34. Development of adequate visual and auditory perception ability to help child remember words.
35. Development of eye and hand coordination.
36. Development of self confidence as evidenced by free conversation and dramatic play.
37. Development of motor skills to enable child to use pencil effectively enough to produce circles and straight lines necessary for manuscript writing.
38. Introduction to the association of number symbols, number pictures, and semi-concrete number patterns.
39. Introduction of numbers 1 to 10 in the one-to-one correspondence, of the one more than the preceding number.
40. Development of the serial idea of numbers.
41. Locating the place of the numbers 1 to 10 without counting, as 5 comes after 4 and before 6.

Level 3

MAIN OBJECTIVES

1. Reading readiness continued.
   a. Continued development of social and character traits which are essential to successful membership in a group.

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b. Continued enrichment of child's concepts through real and vicarious experiences based upon the child's ability to associate these experiences with his own life and interests.

2. Continuous maintenance of abilities developed on Levels 1 and 2.
3. Continuation of experiential reading.
5. Continued development of ability to hear and reproduce sounds.
6. Continued development of visual perception skill.
7. Continued development of adequate eye sweep and left to right eye movements in reading.
8. Emphasis placed upon the fact that reading is essentially a process of thinking which is stimulated by written or printed symbols.
9. Continued emphasis upon development of ability to listen.
10. Emphasis placed upon actual reading practices which utilize the intrinsic, the kinaesthetic, and the phonetic approach.
11. Increase in ability to see a purpose in reading.
12. Increase in ability to read with understanding and enjoyment.
13. Increase in ability to use context clues.
14. Increase in command of sight words.
15. Continued development of skill in visualization of configuration of letter groups, so that foundations are laid for transfer of reading skills to spelling.
16. Continued development and enrichment of oral language so that the child may satisfactorily receive and transmit ideas.
17. Continued development of skill in use of pencil so that child may write well enough to express simple thoughts.
18. Emphasis placed on semi-concrete number experiences which will lead child to an understanding of numbers, and the meaning of addition and subtraction.
19. Continued development of wholesome attitudes and habits, and desirable group and individual standards of loyalty and cooperation.

SPECIFIC OUTCOMES

1. Shows keen interest in pictures, books, and reading activities.
2. Shows a thoughtful attitude in reading.
3. Shows ability to interpret pictures and stories read.
4. Reads silently in sentence units with no lip movements.
5. Reads with left to right eye sweep without keeping place with finger.
6. Understands the meaning of simple sentences without reading them aloud.
7. Reads short thought units aloud, fluently and naturally.
8. Can follow oral directions based upon the reading lesson.
9. Can follow written instructions growing out of reading activity.
10. Can see the relationship between incidents in stories read, and in own experiences.
11. Listens thoughtfully and carefully.
12. Cooperates with teacher, and with group.
13. Feels pride and satisfaction in his own success, and in the success of his group.
14. Has proper habits in the care and use of books.
15. Can use context clues through
   a. rhyming words and phrases
   b. knowledge of differences in sounds
   c. through use of words in the sentence
16. Shows word analysis skill through knowledge of
   a. general configuration
   b. similarities and differences
   c. basic words in derived forms
   d. plural forms
   e. phonetic elements
      1. rhyming sounds
      2. initial consonants
      3. consonant blends
      4. long and short vowel sounds
17. Can follow the sequence of ideas presented.
18. Anticipates the sequence of ideas presented, and predicts how the story ends.
19. Can read for specific purposes, such as
   a. to learn the important happenings in a story
   b. to learn the main characters
   c. to answer definite questions
   d. to follow directions
20. Can read in thought units fluently showing increased eye span.
22. Has developed the basic sight vocabulary which enables child to read meaningfully and easily the following books.
   a. Pre-Primers
      1. We Look and See
      2. We Work and Play
      3. We Come and Go
      4. Rides and Slides
      5. Here and There
      6. Before Winky
      7. Winky
      8. Mac and Muff
      9. The Twins, Tom and Don
      10. Going to School
   b. Primers
      1. At Play
      2. Fun with Dick and Jane
      3. Day in and Day out
      4. Bob and Jane
      5. Day by Day
      6. Fun in story
   c. First Readers
      1. I Know a Secret
      2. Our New Friends
      3. To and Fro
      4. At Work and Play
23. Has developed sufficiently in oral language to enable child to carry on exchange of ideas within his group without using baby talk, and with an understanding of courtesy in conversation.
24. Shows growing ability to use correct verb tense.
27. Can write original short stories containing several sentences.
28. Can spell the basic words used in pre-primers, "We Look and See", and "We Work and Play".
29. Uses capital letters for own name, and for the beginning of a sentence.
30. Understands the use of the period and the question mark.
31. Knows the names of the letters of the alphabet.
32. Recognizes the letters of the alphabet, both in capital and lower case form.
33. Can write legibly in manuscript all the letters of the alphabet.
34. Has achieved a basic concept of numbers through the development of the following understandings as embodied in the number book, "Working with Numbers".
   a. The association of number-symbols, number-pictures and semi-concrete number-patterns.
   b. The one-to-one relationship of numbers through the introduction of each as "one more than" the preceding number.
   c. The idea that any number above 1 may be a combination of smaller numbers.
   d. The serial idea of numbers.
   e. The group idea of numbers.
   f. Partial counting.
   g. Locating the place of a number in a series without counting.
   h. Quantitative concepts, "more", "more than", "as many as", "less", "smaller", "larger", "shorter", "longer", "higher", "lower".
   i. Spatial concepts, such as top, bottom, edge, middle, front, back.
   j. Use of ordinals first to sixth.
   k. Writing the number symbols in association with pictures and printed words.
   l. Reading and writing to 100 by tens with emphasis on the relationship of the order of the tens to the order of the ones.
   m. The "teens" numbers, stressing the fact that each is 1 ten and several ones.
   n. Addition of numbers with sums of 10 or less.
   o. Subtraction of numbers with minuends of 10 or less.
   p. All the "stories" about each number used in items n and o.
      After the processes of addition and subtraction are taught separately to avoid confusion in understanding, the two groups of facts are combined to make the relationship more meaningful.
   q. The vertical form of addition and subtraction.
   r. One-half of a whole, and one-half of a group.
   s. Rote counting to 100.
   t. Rational counting to 20.
   u. Writing of numbers to 100.
   v. Recognition of numbers necessary to identify the pages in the reading lessons.
Level 4

MAIN OBJECTIVES

1. Continuation of reading readiness.
2. Continued emphasis upon importance of listening.
3. Rapid progress in fundamental skills, attitudes and habits.
4. Continuation of experiential readings.
5. Continuous development and synchronization of meaning and sight vocabularies.
6. Emphasis placed upon the reading of an abundance of easy interesting materials.
7. Continued emphasis upon auditory and visual perception.
9. Knowledge of language usage which will enable child to express himself clearly, and easily, both verbally and in writing in situations which are normal for his age group.
10. Foundations laid for successful work in numbers through special attention to:
   a. Development of meaningful concepts.
   b. Building of an understanding of the number system.
   c. The development of a knowledge of the number facts and number processes which will make possible the successful and meaningful solution of simple problems encountered in a child's daily life.

SPECIFIC OUTCOMES

1. Enjoys reading.
2. Has an inquiring attitude toward the reading process.
3. Attaches meaning to the printed symbol.
4. Shows independence in word recognition through picture aids, context clues, and sense of sound.
5. Applies successfully his knowledge of the sounds of the consonants in their initial, medial, and final positions.
6. Has usable knowledge of the consonant blends, wh, sp, th, sm, cl, wr, tr, pr, sh, sn, ch, bl, br, pl, fl, fr, tw, dr, dw, sk, sl, gl, gr, str.
7. Has usable knowledge of long and short vowels.
8. Has usable knowledge of phonetic elements, er, ee, ea, ow, an, oa, ou, as in mouth, ay, at, old, op, ear, or, ir, oo, ar, ea as in ready, all, av, ad, ab, am, ap.
9. Recognizes endings, ing, y, ed, er, est, ly.
10. Has skill in word analysis through knowledge of:
    a. Compound words
    b. Basic words
    c. Prefixes
    d. Suffixes
    e. Plural forms
f. Contractions

11. Language enrichment through knowledge of synonyms, antonyms.

12. Growth in reading skill which will enable the child to:
   a. Find the answer to a purposeful question.
   b. Find the main idea of a page or section.
   c. Grasp the sequence of ideas.
   d. Infer certain traits in story characters.
   e. Answer questions which require an inference from story facts.
   f. Increase in ability to follow instructions.
   g. Read more rapidly silently than orally.

13. Skill in oral reading as evidenced by ability to:
   a. Give quiet, courteous attention when he is a listener.
   b. Show appreciation and encouragement to one who is reading.
   c. Read in phrases instead of words.
   d. Read in a pleasant, cheerful voice.
   e. Pronounce words distinctly and correctly.
   f. Read so as to give pleasure to self and to audience.

14. Evidence shown in reading of run-over sentences that child is developing adequate eye-voice span.

15. Sufficient command of sight and meaning vocabularies, and word analysis skills to enable child to read fluently and understandingly the following books:
   1. The Wishing Well
   2. Every Day Fun
   3. Round About
   4. Wonderworld of Science, Book I
   5. Good Stories
   6. Busy Days with Little Friends
   7. Growing Up
   8. Along the Way
   9. The Story Road
   10. Faces and Places
   11. Friends and Neighbors
   12. More Friends and Neighbors
   13. Wonderworld of Science, Book II.

16. The Development of oral language as outlined from the text, "Let's Talk".
   1. Talk so that all the others can hear you.
   2. Talk when no one else is talking.
   3. Tell the whole story.
   4. Tell what happened first. Tell things in the order in which they happened.
   5. Take your turn. Don't talk too long at a time.
   6. Tell things that others would like to know about.
   7. Use what you have learned about in talking to others.
   8. Think what you need to say, then say just what you mean.
   9. When you tell how to make something, tell things in the order in which you do them.
   10. Use words that say what you mean.
   11. Learn to say things in new ways.
   12. Say "I saw" instead of "I seen", or "I have saw".
13. Listen for the words that rhyme.
14. Listen for the words that make you think of a picture.
15. Listen for words that tell about things, as words that tell about noise.
16. Say the "ing" on word endings, as "going".
17. Say "hasn't" or "has no".
18. Say "haven't any" or "have no".
19. Say "I am not".
20. Say "I did it".
21. Say "I have done".
22. Say "isn't".
23. Say "has come" or "have come".
24. Say "aren't you" or "we aren't" or "they aren't".
25. Say "is" when you talk about one thing. Say "are" when you talk about more than one thing.
26. Say "has no" or "hasn't any".
27. Say "have no" or haven't any".
28. Pronounce words clearly and correctly.
29. Be sure you get the meaning of what you read or hear.
30. Learn to write letters.
31. Learn to write short stories.
32. Learn to introduce people who do not know each other.
33. Learn to write what you want to say in simple sentences.
34. Use correctly capital letters, periods, question marks.

17. Shows evidence of ability to transfer from reading to spelling the habit of attention to word parts, and word analysis, the knowledge of letters and their sounds, which are determining factors in spelling success or failure.
18. Shows evidence of ability to use independently the method of studying spelling which is given in the Arizona State Primary Spelling Outline.
19. Can spell, and use in written work the words given in the above outline, and supplemented by the list from the state adopted text.
20. Utilizes this ability to spell by writing original sentences and stories in connection with daily language and reading work.
21. Slow, careful instruction in numbers, as outlined in "Working with Numbers", Book II, which lay the foundation for later work with numbers through the development of number concepts, the development of an understanding of the number system as a way of thinking, and the development of a knowledge of number facts and number processes as indicated.

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1 Helen K. Mackintosh, "We Are Teaching the Three R's," NEA Journal, November 1950, p. 573-4.
2. Learning the places of numbers above 10, without counting, as 14 comes before 15, and after 13.
3. Use of ordinals, first to tenth.
4. Reading and writing numbers to 200, by tens, with emphasis on comparing the order of the tens with the order of the ones and the order of the teens numbers.
5. Counting 100's to 1000, with emphasis on comparing the order of the 100's with the order of the ones.
6. Learning that each number above 10 is composed of 1 or more tens, and possibly some ones.
7. Counting by 2's to 20, 3's to 12, and 5's to 100.
8. Addition of numbers with sums of 17 or less, stressing addition as a process of "putting together".
9. Adding by endings, to make for more accuracy in column addition and later in carrying in multiplication.
10. Column addition as listed in the manual for "Working with Numbers".
11. Adding two figure numbers involving the number facts which have been taught which require no carrying.
12. Subtraction of numbers with minuends of 17 or less, stressing subtracting as a process of taking away a part. Problems to find the "number left", "the number gone", and "the number needed" are included.
13. Subtraction of two-figure numbers involving the number facts which have been taught, and which require no borrowing.
14. Development of rate of speed and accuracy which will enable child to pass tests on the addition and subtraction facts taught at the speed of 45 problems in 3 minutes with 100% accuracy.

15. Measurements, inch, foot, pint, quart, dozen, half-dozen.
16. Money—cent, penny, nickel, dime, quarter, dollar, half dollar.
17. Sight vocabulary of arithmetic terms needed for the above work.

Level 5

MAIN OBJECTIVES

1. Continuation of reading readiness.
2. Continued emphasis upon the importance of listening.
3. Continued rapid progress in the fundamental skills, attitudes and practices.
4. Continued emphasis upon the synchronization of meaning and sight vocabularies.
5. Continued emphasis upon the reading of an abundance of easy, interesting materials.
6. Increased emphasis upon word analysis techniques which will develop greater independence in solving word problems.
7. Increase in size of basic reading vocabulary until the child has a well established command of 700 to 900 words.
8. Increased powers of self-direction and persistence.
9. Increased oral and written language power, through enrichment by means of knowledge of synonyms, antonyms, simple definitions, simple classifications of common words as nouns, verbs.
10. Increased ability to read and interpret paragraph units.
11. Ability to enjoy reading as a leisure activity.
12. Realization that through reading, one can get information independently.
13. Increased ability to transfer word analysis skills to spelling words.
14. Increased useful understanding of the number system and the automatic use of addition and subtraction facts needed for problem solving on this level.

SPECIFIC OUTCOMES

1. Enjoys reading independently.
2. Shows desirable attitude toward books.
3. Shows greater confidence in power to read.
4. Has the power to answer a fairly complicated question with a complete sentence.
5. Has the ability to tell interestingly and in sequence what he has read or seen.
6. Ability to relate his experiences, both directed and vicarious to his reading.
7. Ability to recognize and interpret the symbols of punctuation.
8. Has formed the habit of reading silently without moving his lips.
9. Has an eye and an ear for rhyming sounds, for likenesses and differences in words, and for word elements.
10. Uses his knowledge of the following phonetic sounds and elements:
   a. Single consonant sounds - initial, medial, final positions; s, c, r, b, m, h, p, l, w, f, g, n, t, d, j, k, y.
   b. Double consonants:
      wh, th, voiced, th, voiceless, ch, scr, gr, fr, tr, br, cr, kn, st, str, sk, pl, cl, fl, sh, sm, sn, sp, pr.
   c. Usable knowledge of long and short vowels.
   d. Phonetic elements:
      er, ee, ea, ow, ending y, an, oa, ou, as in mouth, ay, et, at, old, op, ear, or, er, oo, ar, ea as in ready.
   e. all, aw, am, ad, ab, it, ite, ate, ake, ot, ut.
   f. Endings:
      ing, y, ly, er, est, ed.
   g. Plural forms, by adding, s, es, ies.
   h. Phonetic elements spelled alike, but pronounced differently in different words, as: ea, ready, spread, thread, bread, tea, leaf, each, peach, teach, eat, ear, tear, fear, shear, dear, bear, tear, pear, wear.
11. Usable knowledge of compound words, prefixes and suffixes.
12. Thinks while reading.
13. Can read under guidance of good purposeful question.
15. Can retain facts about a story that has been read.
16. Can organize, select and evaluate what is read.
17. Reads in a smooth, natural tone of voice.
18. Can use table of contents.
19. Can read successfully the following readers:
   - Good Times
   - Anything Can Happen
   - Jim and Judy
   - Story Hour Primer
   - The New Winston Primer
   - The New Winston First Reader
   - Let's Talk
   - Wide Wings
   - Story Hour, Book I
   - Here and Away
   - Stories We Like
   - Friendly Village
   - Neighbors on the Hill
   - Far-away Ports
20. Has made automatic the oral language abilities developed on Level 4, through the use of the Text, "Let's Talk".
21. Can spell and use in written work the words listed for spelling, Level 3 in Arizona State Primary Spelling List, and Spelling Book 2, State Text.
22. Habitually uses capital letters for beginning sentences, and for proper names. Uses periods, question marks and knows the meaning of commas, quotation marks, and exclamation marks.
23. Has made automatic the number skills developed on Level 4, and has begun the work required for Level 6.
24. Shows evidence of daily use of the basic skills developed on Level 4.

Level 6

MAIN OBJECTIVES

1. Continued maintenance and extension of objectives and outcomes developed on Levels 3, 4, and 5.
2. Continued stimulation of a keen interest in reading a wide variety of materials for both pleasure and information.
3. Rapid growth in ability to get the meaning of, and ideas from, varied types of reading.
4. Improvement and refinement of skills of word perception.
5. Increased speed of silent reading, and increased length of attention span.
7. Increased skill in use of reference books and library books.
8. Ability to see the parts of a story in proper relationship.
10. Ability to speak clearly and correctly in conversation.
11. Ability to use good sentences in oral and written language.
12. Ability to do the writing which is suitable for the needs of this level, using capitals and punctuation marks as needed.
13. Ability to spell the basic words needed for written work.
14. Ability to make oral and written reports on stories, books, and experiences.
15. Ability to use addition, subtraction facts, and simple fractions, multiplication and division facts, as listed for this level in the arithmetic outline.
16. Ability to solve one and two step problems based upon the child's daily living.
17. Development of number vocabulary to keep pace with daily number needs.

SPECIFIC OUTCOMES DESIRED

1. Knows the basic sight words and unphonetic words.
2. Has the power to get words from context.
3. Has functioning phonetic skill covering the sounds and elements developed on preceding levels.
4. Has broadening word analysis skills based upon the following additional work:
   a. Phonograms: ee, ight, ai, ain, ail, ake, en, eep, ell, un, ock, oi.
   b. Vowels with r: ar, er, ir, or, ur.
   c. The Beginnings: dis, re, un.
   d. Endings: able, ful, er, est, ied, ies, less, ly, ness, tion.
   e. Knowledge of syllabification.
   f. Finding little words in big words.
   g. Compound words.
   h. Knowledge of unusual or unphonetic pronunciations.
   i. Word building by adding prefixes and suffixes.
   j. Knowledge of long and short markings for vowels.
   k. Knowledge of basic words in plural forms, or in variants.
   l. Discriminate between the varied meanings of words and select the meaning appropriate to the context.

5. Can read
   a. to locate the answers to questions or to find information on a question;
   b. to understand, appraise, and select material to answer a question or to make a report;
   c. to organize what is read for the purpose for which it is read;
   d. to understand material in such a way as to provide for remembering it.
6. Voluntarily turns to reading as a leisure activity.¹ ²
7. Can interpret accurately materials related to other subjects.
8. Can read more rapidly silently than orally.
9. Reads both silently and orally in thought units.
10. Follows consciously good patterns of pronunciation, enunciation, and articulation.
11. Finds pleasure in rhythmic verse.
12. Strives for the following desirable standards for reading or talking:
    a. Stands or sits erect.
    b. Knows what he is going to say.
    c. Looks at the person to whom he is talking.
    d. Is easily heard.
    e. Is easily understood.
    f. Has a friendly, low-pitched voice.
    g. Uses the right word.
13. Uses table of content, unit and chapter titles, and page numbers in locating information.
14. Uses independently many types of materials, including story books, magazines, newspapers.
15. Withdraws and returns reference materials or library books properly.
16. Has learned alphabetizing as a prerequisite for dictionary work.
17. Can organize materials read to make oral or written reports.
18. Shows power in inferring implied information.
19. Can read successfully the following books:
    Round About You  Enchanting Stories
    Visits Here and There  Science Book Three
    New Winston Book II  Children Everywhere
    Streets and Roads  If I were Going
    Busy World  Making Words Work
    Laidlaw III
20. Shows language development as outlined in the text, Making Words Work.

¹ Franklin Bobbitt, The Orientation of the Curriculum Maker, p. 41-56.
² F. G. Bonser, Curriculum Making, p. 1
22. Spells and uses correctly the words on spelling Levels 1, 2, 3, in the Primary Outline, and in Book III of the State Text.
23. Shows usable understandings and skills in numbers as specified in the Arithmetic Outline for this level.

The program for the grades from IV to VIII is formulated in less detail, as it is assumed that the improved fundamental teaching of the primary grades will prevent many of the difficulties formerly found in the intermediate and upper grades. However, in these grades, a simultaneous hour each day is spent on actually teaching reading techniques. Each teacher is assigned a group at a homogeneous reading level. Pupils in each room are tested and grouped by ability and go to the teacher who teaches that level at the daily reading hour. As a pupil accomplishes the requirements of his level, he is transferred to the next, in another room, for the reading hour. Thus each teacher's time can be spent intensively on one level and the reading program does not interfere with the other activities of these grades.

Here again is followed the principle of finding a child's actual level, and special needs; and starting at that point to help him to progress as his best rate of speed as far as he has the ability to go.
CHAPTER IV

THE PROGRAM IN OPERATION

Testing The Program

At the opening of school in September, 1950, the pupils were assigned to home-rooms according to grouping based on the February achievement tests, shaded by consideration of their age, social and mental maturity, physical size and maturity, emotional stability, or other reasons the teacher thought significant. This resulted in the "levels" groups as planned in the preceding chapter.

In September the Durrell-Sullivan Capacity Test was given to Grades II through VII. Each "level" was then subdivided into three groups for reading, according to the ability shown by the tests and observed by the teacher. The pupils with special disabilities were given individual help by the supervisor. When children lost step with their groups because of absence, they were brought up to date by the teacher or supervisor. In cases where the pupil did not make the progress that might be expected of him, it was discussed with the supervisor and the parents. Some adjustments were made in group and room placements to remedy unfavorable situations. In several cases home upsets and health conditions had to be considered. When the children of migrant labor families arrived during the year, they were tested and placed in "level" groups according to their ability, and were given individual help to make the necessary adaptation. Some of the older Spanish-speaking pupils were allowed to go just for reading.
time, to lower level groups for instruction in basic vocabulary. When it was observed that quick-learning pupils moved too rapidly from group to group, an enriched curriculum was provided for them to more adequately challenge their greater capacity and prevent their placement at advanced levels for which they might be socially immature. For the slower learners only that material was offered which was considered essential to develop the tool skills necessary for further progress. In every case definite effort was made to see that each pupil was enabled to make positive progress according to his known ability.

As the pupils progressed, and moved to succeeding groups, these groups tended to become more homogeneous, and to allow for consistent and evenly "paced" development of the pupils.

In February, 1951, the Durrell-Sullivan Achievement test was administered to the same grades. The grade-equivalents derived by tables from the scores of this test were compared with the grade equivalents of the Capacity test given in September.

**Analysis of the Test Scores**

The purpose of the statistical study of the scores of these tests was to discover whether the results of the testing program given in two different years show that the treatment of the pupils in the second year (1950-51) resulted in a greater amount of progress in reading ability than was the case in the first year (1949-50). The plan of the study was to compare the improvement the first year with the improvement for the second year by means of the difference in the mean improvement by grades and for the whole school.
Also, the capacities of the pupils at the beginning of each of the two years were compared in the same way since for each year this was the point from which the improvement took place.

The data which has been studied will be explained first. The appropriate Durrell-Sullivan\(^1\) Capacity test was given to all pupils from Grade II to Grade VII inclusive at approximately September twentieth of each year. Using the table published with the tests the scores were converted into grade equivalents which may be hereafter denoted by \(c_0\) and \(c_1\) for 1949-50 and 1950-51 respectively. On approximately the twentieth of the following February, the corresponding Durrell-Sullivan Achievement test\(^2\) was given and the corresponding conversion table contained in the manual of directions for administration of the tests was applied to give grade equivalents here denoted by \(a_0\) and \(a_1\) respectively. Only those pupils were considered who in a given year took both tests; the number was 453 for 1949 and 449 for 1950-51. These numbers were further reduced by eliminating altogether from the study those who either attained a perfect or zero score on a test or who obtained a score for which no grade equivalent had been established by the publishers of these tests. It was immediately clear that the latter cases should be omitted from the study since they went off the scale of

\(1\) Durrell-Sullivan Primary and Intermediate Reading Capacity tests, Forms A and B.

\(2\) Durrell-Sullivan Primary and Intermediate Reading Capacity tests, Forms A and B.
measurement. The former had also to be excluded since a pupil just attaining a perfect or zero score could not be distinguished from one who could have done much more or less if the test had been more inclusive. In doing this it was realized that a group (such as each grade) which might otherwise have been distributed normally would not be so distributed after these discriminatory omissions had been made. The following table shows the numbers omitted and the reasons:

Table I

<table>
<thead>
<tr>
<th>Grade</th>
<th>1949-50</th>
<th>1950-51</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>g</td>
<td>c</td>
</tr>
<tr>
<td>II</td>
<td>26</td>
<td>11</td>
</tr>
<tr>
<td>III</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>IV</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>V</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>VI</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>VII</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>11</td>
</tr>
</tbody>
</table>

g : off capacity test scale, lower end.

c : off capacity test scale at upper end.
a : off achievement scale at lower end.

a : off achievement scale at upper end.

c\ _a : off both capacity and achievement scale at lower end.

c\ _a : off both capacity and achievement scale at upper end.

Total represents all students of a grade omitted because of indeterminacy of progress, due to being off either scale or both.
Of course, the tests were not administered with the present analysis in view but rather for diagnostic purposes described elsewhere in this paper. Had they been given solely for the purpose of this statistical study, an effort could have been made to use a battery for which the phenomena in question would not have arisen to this extent.

However, Table I shows that for the second year all those that had to be omitted were omitted because they were below scale in September, but they had been brought on scale by February. Whereas, for the first year and same grade many more had to be omitted, and eleven had still not been brought on scale by February. For the third grade the difference between the two years was even greater. This would indicate that the new program was much more effective for those pupils who were extremely weak at the primary levels than the previous program had been.

Passing on to several other features involved in assembling and processing data, it will be remembered that the least satisfactory conclusions in this study should be expected from grades II and VII.

The actual number of school days intervening between the capacity test and the achievement test varied for different class rooms (sixteen the first year, and seventeen the second) between 83 and 93, as the period of administering the tests actually covered ten school days. The improvement for a given pupil might therefore have been roughly 10% greater if he had been tested at an interval of 93 days rather than 83. Adjustments for this circumstance would not have been especially difficult to make since they could have been applied on a proportional basis¹ to

¹ Henry E. Garrett, *Statistics in Psychology and Education*, p. 64.
the means and standard deviations of the various class rooms before these were combined by grades. However to reduce all the statistics computed to a certain mean number of elapsed days (e.g. 88 days) would have made very little change and these changes would to some extent average out for each grade. Actually the conclusions reached were found not to depend on any such narrow margin as this. Since all grade equivalents were subject to accidental errors affecting individual pupils, were determined to only one decimal place, and had the feature just mentioned arising from slight differences of elapsed time between tests, it may be surprising that the computations were carried out to the degree of accuracy shown below. This was done to avoid the possibility of any uncertainties arising from the arithmetical processes employed. As a matter of fact, all computations reported were themselves the result of rounding off from somewhat more precise calculations to what seems the most appropriate number of decimal places.

The difference $a_0 - c_0$ and $a_1 - c_1$ for a given pupil can be considered as at least a tentative measure of his progress for the corresponding year. The distribution of these progresses for the two years is shown as a frequency polygon in Figure 1 and as a cumulative frequency on a percentage basis in Figure 2. The principal contention of this analysis is quite apparent from these Figures; the numerical part of the presentation which is to follow serves to establish in the conventional way what these figures suggest, and to examine each grade for the same tendencies.
Frequency Polygon Showing the Number of Pupils Making the Indicated Progress in Grade Equivalent

Figure 1

1949-50
373 Pupils
Mean: 0.728
S.D.: 1.038

1950-51
405 Pupils
Mean: 1.505
S.D.: 0.615

Progress in Grade Equivalent
Chart Showing the Percentage of Pupils Making More Than the Indicated Progress in Grade Equivalent

Figure 2
Variance, the square of the standard deviation, is defined\(^1\) and its additive nature is brought out. This additive property is responsible for giving variance instead of standard deviation in tables II and IV. The mean and variance of these progresses were calculated for each grade to yield the data of Table II.

<table>
<thead>
<tr>
<th>Grade No.</th>
<th>Mean of Progress</th>
<th>Variance of Progress</th>
<th>Variance of Mean No.</th>
<th>Mean of Progress</th>
<th>Variance of Progress</th>
<th>Variance of Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>II 46</td>
<td>0.84</td>
<td>0.2863</td>
<td>.006224</td>
<td>70</td>
<td>1.15</td>
<td>0.1562</td>
</tr>
<tr>
<td>III 51</td>
<td>0.23</td>
<td>0.4546</td>
<td>.008914</td>
<td>88</td>
<td>1.11</td>
<td>0.1955</td>
</tr>
<tr>
<td>IV 83</td>
<td>0.60</td>
<td>1.11219</td>
<td>.013408</td>
<td>76</td>
<td>1.69</td>
<td>0.3139</td>
</tr>
<tr>
<td>V 72</td>
<td>0.64</td>
<td>1.4735</td>
<td>.020465</td>
<td>76</td>
<td>1.69</td>
<td>0.2151</td>
</tr>
<tr>
<td>VI 58</td>
<td>0.91</td>
<td>1.4808</td>
<td>.025532</td>
<td>60</td>
<td>1.83</td>
<td>0.5195</td>
</tr>
<tr>
<td>VII 63</td>
<td>1.16</td>
<td>0.8360</td>
<td>.013271</td>
<td>35</td>
<td>1.84</td>
<td>0.4561</td>
</tr>
<tr>
<td>All 373</td>
<td>0.73</td>
<td>1.0782</td>
<td>.002898</td>
<td>405</td>
<td>1.50</td>
<td>0.3785</td>
</tr>
</tbody>
</table>

For each year in this table the entry in the last column gives the variance of the corresponding mean according to formula (22).\(^2\) The square root of one of these numbers, that is the standard deviation of a mean, would give an indication of how this mean could be expected to fluctuate if the whole experiment could be repeated indefinitely often.

The principal purpose of Table II was to present the data from which Table III was deduced.

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2 Ibid., p. 184.
Table III

<table>
<thead>
<tr>
<th>Grade</th>
<th>Difference of means of Progress</th>
<th>Std. Dev. Difference of means of Progress</th>
<th>Critical Ratio (Quotient)</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>0.31</td>
<td>0.092</td>
<td>3.41</td>
</tr>
<tr>
<td>III</td>
<td>0.88</td>
<td>0.105</td>
<td>8.35</td>
</tr>
<tr>
<td>IV</td>
<td>1.09</td>
<td>0.132</td>
<td>8.26</td>
</tr>
<tr>
<td>V</td>
<td>1.05</td>
<td>0.153</td>
<td>6.87</td>
</tr>
<tr>
<td>VI</td>
<td>0.93</td>
<td>0.185</td>
<td>5.01</td>
</tr>
<tr>
<td>VII</td>
<td>0.68</td>
<td>0.162</td>
<td>4.17</td>
</tr>
<tr>
<td>All</td>
<td>0.78</td>
<td>0.062</td>
<td>12.54</td>
</tr>
</tbody>
</table>

In the second column of this, for each grade, is to be found the amount by which the mean progress in the second year is greater than it was for the first year. The very fact that this is a positive difference for each grade leaves very little question that the school program for the second year was a significant improvement over that for the first as far as the scores could show. In order to apply the conventional test of the significance of this difference of means, the standard deviation of the difference of means for each grade was obtained from the variances in Table II by taking the square root of their sum according to formula (29). The ratio of the difference of means in each grade to the standard deviation of this difference, known as the critical ratio, was then interpreted on the scale of the Normal

2 Ibid., p. 199.
Probability Curve. In particular, a critical ratio of more than 2.58 would occur by accident if there were no actual improvement only about one time per 100, so the assumption of no essential difference in mean improvement between the two years, the "null" hypothesis, cannot be retained for any single grade. In the last line of each of these tables the results of considering together the progress for all pupils irrespective of their grade location are shown. The difference of means is over 12 times the standard deviation of that difference, showing that the difference is extremely significant. Taking a slightly different approach it can be said with confidence of 99% of being right that the progress the second year was between 0.62 and 0.94 greater than it was the first year.

The use of the normal probability curve in judging the significance of the critical ratio is justified since when the sample number is not too small the difference of sample means is distributed approximately according to the normal curve even though the populations from which the samples are drawn are not themselves normal. As a matter of fact, the distribution of $a_o - c_o$ and $a_1 - c_1$ are both seen from Figure 3 to be distributed rather normally, but the standard deviations (slopes in Figure 3) seem quite definitely different. This latter circumstance

1 Henry E. Garrett, *Statistics in Psychology and Education*, Ch. V.
2 Ibid., p. 203.
3 Ibid., p. 199.
4 Ibid., p. 187-188.
5 Ibid., p. 186.
Chart Showing the Percentage of Pupils Making more than the Indicated Progress in Grade Equivalent

(Normal probability curve would be straight on this coordinate paper)

Figure 3

Progress in Grade Equivalent

Figure 3.
alone would make the application of the so-called small sample theory of questionable use in judging significance of difference of means since its application assumes equality of variances of the populations from which are drawn the samples whose means are being compared.

Many of the pupils examined in the first year were also examined the second year. Correlation between $a_0 - c_0$ and $a_1 - c_1$ might be expected for these. This turned out not to be the case to a significant degree. For the 182 pupils who took all four tests, the correlation coefficient was found to be only 0.075. The calculations which gives $t = 1.01$, a deviation of only one sigma, indicate that a value as great as 0.075 could easily have arisen by sampling accidents alone when no correlation is present. So the 182 cases give no reason to doubt the absence of correlation between progress first year and second year. Thus progress second year is considered independent of progress first year, and the data may be analyzed as explained above rather than by the single group method which would restrict attention to the 182 pupils who took all four tests.

Since progress each year was measured from the result of the grade equivalent determined from the capacity test, it seems desirable to examine the capacity grade equivalents themselves. They were

1 Henry E. Garrett, *Statistics in Psychology and Education*, pp. 188-204.
accordingly analyzed in essentially the same manner as described above for progress, the results appearing in tables IV and V.

**Table IV**

<table>
<thead>
<tr>
<th>Grade</th>
<th>No.</th>
<th>Mean of Capacity</th>
<th>Variance of Capacity</th>
<th>Variance of Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>46</td>
<td>1.55</td>
<td>0.2486</td>
<td>0.005404</td>
</tr>
<tr>
<td>III</td>
<td>51</td>
<td>2.10</td>
<td>0.3204</td>
<td>0.006282</td>
</tr>
<tr>
<td>IV</td>
<td>83</td>
<td>3.77</td>
<td>1.1064</td>
<td>0.013330</td>
</tr>
<tr>
<td>V</td>
<td>72</td>
<td>4.47</td>
<td>1.6258</td>
<td>0.022580</td>
</tr>
<tr>
<td>VI</td>
<td>58</td>
<td>5.10</td>
<td>1.4469</td>
<td>0.024946</td>
</tr>
<tr>
<td>VII</td>
<td>63</td>
<td>5.59</td>
<td>1.0742</td>
<td>0.017051</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reflection will show that for this study, all grade locations should not be pooled together as they were for progress. It may be observed that the mean capacities of the second and seventh grades differ from what might be expected more than do the others. This is in large measure accounted for by the exclusion of those pupils having one or more scores off scale.

**Table V**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Difference of Mean Capacities</th>
<th>Std. Dev. Difference of Mean Capacities</th>
<th>Critical Ratio (Quotient)</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>-0.15</td>
<td>0.093</td>
<td>-1.62</td>
</tr>
<tr>
<td>III</td>
<td>0.05</td>
<td>0.095</td>
<td>0.56</td>
</tr>
<tr>
<td>IV</td>
<td>0.50</td>
<td>0.174</td>
<td>2.87</td>
</tr>
<tr>
<td>V</td>
<td>0.69</td>
<td>0.197</td>
<td>3.49</td>
</tr>
<tr>
<td>VI</td>
<td>1.04</td>
<td>0.216</td>
<td>4.81</td>
</tr>
<tr>
<td>VII</td>
<td>0.52</td>
<td>0.238</td>
<td>2.19</td>
</tr>
</tbody>
</table>
It will be noted from the 4th column of Table V that the mean capacity for each of the grades IV to VI and perhaps VII was significantly (at the 99.5 level) greater the first year than it was the second. This may be explained by the regrouping that took place before the second year producing an appreciable amount of homogeneity in each grade or "level".

As a result of the analysis of the scores of the tests there can be little doubt that the program for 1950-51 had a very real influence and improved the reading ability of the pupils as far as the ability may be measured by the Durrell-Sullivan tests. This examination reveals definitely greater and more consistently paced progress in their reading ability.
CHAPTER V

CONCLUSIONS AND SUMMARY

As stated in the Introduction, the purpose of this study has been two-fold; to find the causes for the low reading ability of the pupils in this district, and to devise a plan for a more effective reading program in the school.

The writer believes that the general survey of the previous community and school situation reported in Chapter I gives the background for the causes. They are more specifically diagnosed and listed from the findings of the supervisor, given on pages eighteen and nineteen, and from the problems presented by the teachers, given on pages twenty-one and twenty-two of Chapter II.

The new reading program was prepared by the supervisor and teachers to definitely meet these causes, and was administered in the second year of the experiment as reported in Chapter III. It has been demonstrated by the analysis of the test scores as given in Chapter IV to have appreciably improved the reading ability of the pupils of this district. Therefore, the writer believes also that a more effective reading program has been devised.

The theme set in Chapter II suggested that social degradation of certain population groups was both the result and cause of their low development of measurable learning ability. The writer believes that this study has definitely demonstrated that when a situation is provided that takes into account the special needs of individuals or groups, and that when methods and materials are applied to fit these needs, the
learning ability of the individuals or groups is thereby greatly increased. The implications of this indication for the greater development of measurable intelligence is suggested as a field for further study.
CHAPTER VI

BIBLIOGRAPHY, PART I

BOOKS:


PERIODICALS:


MacIntosh, Helen K., "We Are Teaching the Three R's", NEA Journal, November, 1950, Washington, D.C., pp. 574-575.


BULLETINS:


TESTS:

CHAPTER VII

BIBLIOGRAPHY, PART II (ANNOTATED)

BOOKS:


This study was useful as it shows the emotional instability of the subnormal girls in the upper grades of Elementary School, who cannot learn all the subject matter, but need direction of their interests, and protection from exploitation.


This is a detailed account of methods used to study and adjust children who were brought by parents to the clinic as "behavior problems". It was used by the teachers as background for a case-study conference of the school's "behavior" problems.


This describes the interrelationship between the nervous system and the endocrine glands, to produce changes in the body chemistry, and responses to emotional situations. It points out that the normal tendency is for the constitutional equilibrium to restore itself, therefore external aids to relief may be effective. This was used by the teachers as background for understanding emotional outbreaks and how to treat them.


This is an experimental study which demonstrates that when emotional situations were adjusted, the children showed greater progress in learning. It was used in a discussion group by the teachers.

These two books give a quite adequate discussion of Reading theories, methods and materials for both first teaching and remedial work. The author offers many devices and games for motivation and variety of tools, which were found useful by the teachers.


The author discusses the diagnosis of reading disabilities by standardized testing, and the use of test results to improve a reading program. He is a co-maker of the tests used in the study described in this thesis. He points out by test correlations that many pupils who make high scores in "intelligence" tests, still may be slow in learning to read. This was useful in interpreting the test scores.


While primarily a book on guidance, this was useful for its chapters on developing cooperation amongst members of the school staff, and on organizing the staff to plan for a solution of its special problems.


This is a description of the Kinesthetic method of teaching reading to pupils who do not learn by any other approach, and an account of work done in the California Clinic. A modified form of this method was tried for the children who seemed to be non-readers.


These two manuals were very valuable in planning the program of phonics for each level, to supplement the reading material.


This book covers the field of primary reading, and offers many hints to teachers, and materials for use to help the slow reader. It was used in planning for the materials of each level.

This bulletin is a guide for steps and materials used in preparing the Spanish-speaking pre-school children for entry into regular first grade classrooms. It was also used for aiding the older Spanish-speaking children who entered the school, to be placed at a higher grade level.


This book is for readers with a background of medicine or psychology: it contains case studies of severely maladjusted children with causes, treatments, and results; arranged according to the types of disorders. It was useful as a background for diagnosis of difficult cases.


This textbook was of great value to the teachers who had not kept up with modern psychology, in helping them to form adjusted attitudes in themselves and to guide their pupils to emotional stability.


The conclusion drawn in this book is: The functions of emotions are held in check by the higher brain centers. Excess worry removes the check and permits emotions to run wild. It may be repressed and cause frustration. One aspect of which is paralysis of the thought processes. We found this followed the theme set forth by Norbert Wiener, as quoted in the text. It was helpful in understanding the emotional situation found in many of the labor families.


This study of teacher's personalities and their opinions of their pupils shows that in some cases the maladjustment of the teacher is projected on to the pupils. It was used in a discussion group by the teachers.

A very stimulating book for the general reading of the teachers: it discusses the immature reactions of unadjusted adults individually, and of society as a whole. Then it points out how both individual and society can develop a more mature mind. Some of our teachers were especially encouraged to read this.


This book by an inspiring American teacher was especially recommended to some of the teachers for the purpose of reminding them of the worth of their status as teachers.


This guide to five of the most influential philosophers of Education was consulted and reported on by the teachers, at a conference to discuss the recent Progressive Movement in the schools.


This bulletin contains carefully graded lesson plans, and directions for steps in the systematic development of language concepts and social integration of the large groups of Spanish-speaking children. It was used in planning the program for the pre-school Spanish-speaking group.


This was useful for acquainting some of the teachers with the non-directive method of handling unadjusted children, in the general guidance situations of any classroom.


This writer follows Adler's method of diagnosis and treatment of maladjusted "behavior" cases. It is simple enough for the average not-recently-trained teacher to understand and use. It was used by the teachers as reference for types of behavior problems they found.

This handbook offered the list of graded reading skills required in each level of the Primary reading program set up in this study.


This very readable account of a teacher's realization of adapting a curriculum to the needs of her special community was found stimulating and instructive by the teachers.
These lists are used while the pupil who is being studied reads for the examiner. The kind of mistakes he makes may be checked, and the items noted later in planning work to meet his special needs.

Diagnostic check list for informal inventory of individual (Oral):

<table>
<thead>
<tr>
<th>Names of letters</th>
<th>Phrase reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spelling out</td>
<td>Call words</td>
</tr>
<tr>
<td>Letter sounds</td>
<td>Eye movements</td>
</tr>
<tr>
<td>Blends of consonants</td>
<td>Eye–voice span</td>
</tr>
<tr>
<td>Context clues</td>
<td>Voice control</td>
</tr>
<tr>
<td>Word configuration</td>
<td>Poor enunciation</td>
</tr>
<tr>
<td>Long and short vowels</td>
<td>Speech defects</td>
</tr>
<tr>
<td>Words refused</td>
<td>Lose place</td>
</tr>
<tr>
<td>Words aided</td>
<td>Lip movements</td>
</tr>
<tr>
<td>Prefixes</td>
<td>Letter confusions</td>
</tr>
<tr>
<td>Roots</td>
<td>Reversals</td>
</tr>
<tr>
<td>Suffixes</td>
<td>Substitutions</td>
</tr>
<tr>
<td>Syllabication</td>
<td>Word errors ignored</td>
</tr>
<tr>
<td>Sight words</td>
<td>Finger pointing</td>
</tr>
<tr>
<td>Repeat words</td>
<td></td>
</tr>
</tbody>
</table>

Diagnostic inventory (Silent):

<table>
<thead>
<tr>
<th>Organized recall</th>
<th>Recall detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central thought</td>
<td>Follow directions</td>
</tr>
<tr>
<td>Finger pointing</td>
<td>Lip movements</td>
</tr>
<tr>
<td>Head movements</td>
<td>Eye movements</td>
</tr>
<tr>
<td>Fixations</td>
<td>Regressions</td>
</tr>
<tr>
<td>Eye recognition span</td>
<td>Rate</td>
</tr>
<tr>
<td>Number of words unknown</td>
<td>Words from context</td>
</tr>
<tr>
<td>Words from structure</td>
<td>Tenseness</td>
</tr>
<tr>
<td>Loses place</td>
<td>Attitude</td>
</tr>
</tbody>
</table>
Instead of the old-style "report card", the tendency now is for informal letters and a conference to explain the child's progress in the light of his individual development avoiding comparisons with other children, but only between his actual achievement and his own capacity. A proposed report card form is given here as illustration:

REPORT OF PUPIL PROGRESS

Pupil _____________________________________________

Placement ________________________________________

Year 19___ 19___

_________________________________________________ Teacher

Explanation of Marks

0—Satisfactory Growth. Considering the child's individual potentialities—mental, physical, social, and emotional—he is progressing as well as he should.

X—Improving, but more growth desirable. The child has made some growth, but considering his individual potentialities—mental, physical, social and emotional—he is capable of more rapid growth.

*—Little Growth Shown. Considering the child's individual potentialities—mental, physical, social and emotional—his growth has been slight. Such cases may be attributed to a temporary condition which has affected his normal development. The cause may be due to physical, emotional, or social imbalance. Whatever the cause the school and the home must work out a plan of correction, and attempt to follow it through to a corrected condition. A conference between parent and teacher is imperative for all such cases reported.

No mark after an item means the child isn't being graded on that item.
Enrichment

Enjoys Hand-work
Is learning to appreciate Beauty
Sings and enjoys singing
Listens to good music courteously
Takes part in Rhythm Band
Takes part in Rhythmics and Folk Dances
Is learning to appreciate Nature
Enjoys caring for Plants
Enjoys and appreciates Animals

1st 2nd 3rd 4th 5th 6th
Term Term Term Term Term Term

Days Absent

MESSAGE TO PARENTS: This is a report of our best judgment of your child's growth in fundamental knowledges and skills and in social relationships. It is an individual report and is not intended as a comparison of your child with another. A check indicates the teacher's judgment of your child's growth in each area of school experience. You are invited to confer with the teacher or supervisor at any time regarding your child's growth. The child, the parents and the school, together, build the American Citizen. The teacher has checked the child's growth in each area of experience according to the interpretation of terms shown on front cover.

______________________ Superintendent

PARENT'S SIGNATURE

First
Term ______________________

Second
Term ______________________

Third
Term ______________________

Fourth
Term ______________________

Fifth
Term ______________________

Sixth
Term ______________________

Recommended for work in ________

__________________________ Teacher
### SCHOOL ACTIVITIES AND EXPERIENCES

<table>
<thead>
<tr>
<th><strong>Social Growth</strong></th>
<th><strong>Progress in Subject</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Habits</td>
<td></td>
</tr>
<tr>
<td>Health Habits</td>
<td></td>
</tr>
</tbody>
</table>

#### Progress in character and Personality Development
- Works and plays agreeably
- Is willing to help in group affairs
- Takes responsibility
- Appreciates other children's work
- Is courteous
- Is attentive
- Is obedient
- Respects property
- Respects rights of others
- Offers original ideas
- Follows wholesome Leadership
- observes Safety Rules
- Follows directions
- Stays with job until it is finished
- Puts time to good use
- Works independently
- Is prompt with work
- Takes pride in work
- Shows independence in finding new jobs
- Works quietly
- Works happily
- Enjoys being clean
- Is careful of health
- Is careful of health of others
- Takes care of eyes
- Practices good posture
- Plays actively during playtime
- Is learning self-control
- Is using intermission for lavatory purposes

#### Progress in Subject
- Is interested in Reading
- Gets the meaning of materials read
- Can hear and reproduce sounds
- Is learning to work out word meaning
- Is learning to work out word pronunciation
- Is reading orally
- Can use Table of Contents
- Takes part in Group Conversation
- Uses freely the phrases of courtesy
- Is establishing correct Language habits
- Shows growth in Vocabulary
- Is interested in Writing
- Can spell words needed for work
- Is able to write plainly
- Is improving in speed of Writing

#### Language Arts
- Counts by rote to 100
- Counts rationally to 20
- Can read and write numbers to 100
- Can read and write dollars and cents
- Can spell words needed for work
- Can read and write Roman numbers to XII
- Can read and write numbers to 1000
- Understands use of numbers in daily life
- Is mastering Primary Addition
- Is mastering Primary Subtraction
- Is mastering Primary Times Facts
- Is mastering Primary Division
- Is mastering Primary Fractions
- Can solve simple Reasoning Problems
- Is developing Suitable Vocabulary

#### Arithmetic
- Can read and write numbers to 1000
- Can read and write Roman numbers to XII
- Can read and write numbers to 1000
- Can read and write dollars and cents
- Understands use of numbers in daily life
- Is mastering Primary Addition
- Is mastering Primary Subtraction
- Is mastering Primary Times Facts
- Is mastering Primary Division
- Is mastering Primary Fractions
- Can solve simple Reasoning Problems
- Is developing Suitable Vocabulary
This form is to be used when a pupil leaves this district to explain his standing in terms of a regularly graded school, to avoid confusion in grade placement in another school which may not have the "levels" plan.

TRANSFER PERMIT

Name of Pupil__________________________ Date of Transfer__________

Birth Date__________________________ Transferred to ________________ (School)

Level__________________________

EXPLANATION OF LEVEL PLAN OF ORGANIZATION

The six levels of achievement through which the pupils of this School Primary Department may progress successfully before being admitted to a fourth grade are:

Level 1 - Enrichment for advanced kindergarten and immature first grade pupils
Level 2 - Typical first grade
Level 3 - Typical second grade
Level 4 - Enrichment for advanced second grade
Level 5 - Immature third grade pupils
Level 6 - Typical third grade

Each level has 3 groups, 1, 2, 3, according to the rate of learning.

The first mark is the level, the second the group - as: 3-1 is 3rd level, first group; a quick learner.

List of Readers adequately finished: ________________________________

Place in text being used at time of withdrawal: ________________________________

__________________________
Principal
This Bulletin, following in general the one used by the Hawthorne School of University City, Missouri, is to be sent to parents at the beginning of the school year, to acquaint them with the school's policy.

BULLETIN TO PARENTS

OUR CHILDREN

As parents we want every child to do his best. We want this for two reasons. First, we want each child to do his best so that he will grow up to be the best possible kind of person he is capable of becoming. That is, we want him to do his best for his own sake. The second reason is we want him to do something of which we can be proud. This is a selfish reason of course, and at the moment we are thinking of ourselves rather than of the child. We hope this personal pride is not our main interest, that instead we want the child to do well so that he himself will be happy and useful in his own eyes. But our wanting the child to do well, for whichever reason, has one effect: It often causes us to bring pressure to bear upon the child.

How do parents bring pressure upon a child? By approving some things and disapproving others; by punishments and rewards; by demanding that he spend time on a specific kind of work. One thing for us to remember. Up to a certain point, our pressures may help the child to become what we want him to become. But beyond a certain point, our pressures will stop helping the child and will begin to develop him into something we do not want. Children differ greatly in the amount of pressure that will help. Some children will take a lot of pressure while others will resist pressure very quickly. And still others will outwardly seem to accept pressure but inwardly rebel.

The child never does anything well unless he is interested in doing it. This is as definitely a fact as two and two make four. The child does nothing well when he is forced to do it. He does well only that which he wants to do. This does not mean that the child should "do as he wants" in the sense of following his ignorance or whims. It does mean, however, that we must somehow cause him to want to do what we think he should do. For any real progress, the child must want to go to school; he must want to learn; and he must want to read. Children must want to read before they will learn to read so the home application is that we should make learning to read attractive to a child and never a hard or unpleasant or unhappy task.

LEARNING TO PAY ATTENTION

There are two other things necessary to reading success besides wanting to read. One is the ability to sit still and pay attention long enough to read. Reading means looking at the book or other material
of reading long enough and steadily enough to learn words. If the child does not look, he cannot learn. Scolding does little good. He does not intend to look away from the reading lesson but he just unconsciously does. Everything else attracts his attention. His eyes wander to pictures, to things, to people. Every noise makes him look around. He just cannot concentrate. So he does not learn to read.

Children learn to concentrate or pay attention by practice in paying attention. That is why there are so many toys for young children which lead them to work at something until they get it done. Jigsaw puzzles, tool boards, coloring, pasting and cutting are all good means of learning to concentrate.

Another thing that is necessary to learn to read is the ability to tell things apart when they look very much alike. Many people look very much alike. But, we must learn to tell them apart. In fact, to a child, words such as come and came look as much alike as identical twins. Even "mother" and "father" are almost identical to the beginner in reading. How can a child read if he gets all mixed up and can't tell the words apart. This ability to tell words apart is something that is learned, and it is learned by the natural doings of children. Some children learn it earlier than others. It is a sad thing that so often we do not know about this ability and do not understand that no reading can be learned without it. We may scold the child, but he is completely helpless to do better.

Again to develop the ability to see differences and to tell words apart, we give the children many kinds of toys and activities. We then give them crayons to color with and pictures to match to one another. We keep them busy and happy in the right activities. Then the ability needed for reading comes as soon as the child's "growing up" permits it to come. Part of this ability is just growing up, but we do not need just to sit and wait for it, we can help this kind of growing up just as we help physical growing up with good food and plenty of sleep. After toys and play activities help a child to tell similar things apart, he comes at last to tell one word from another. Then he is ready to read. But remember:

(1) We will not compare one child with another, and

(2) we will make learning to read happy and attractive and not an unhappy experience.
These books were chosen because they offer material of interest to older children, who have rather limited reading vocabulary.

A GRADED LIST OF CADMUS BOOKS FOUND USEFUL IN STIMULATING THE INTEREST OF SLOW READERS

Group One – Kindergarten and Grades 1 & 2:

ANDY AND THE LION by James Daugherty
BREAKFAST WITH THE CLOWNS by Rosalie Slocum
FLIP AND THE COWS by Wesley Dennis
LITTLE TOOT by Hardie Gramatky
MILLIONS OF CATS by Wanda Gag
MY MOTHER IS THE MOST BEAUTIFUL WOMAN IN THE WORLD by Becky
NOTHING AT ALL by Wanda Gag
REAL MOTHER GOOSE

Group Two – Grades 2, 3 & 4

BLACK FACE by Thelma Harrington Bell
BOUNCE AND THE BUNNIES by Ruth Carroll
CANDLELIGHT STORIES, Selected and Edited by Veronica S. Hutchinson
I KNOW A SURPRISE by Dorothy Walter Baruch
PETER, PETER, PUMPKIN GROWER by Florence Bourgeois
TWENTY LITTLE FISHES by Ida M. Mellen
WALTER THE LAZY MOUSE by Marjorie Flack

Group Three – Grades 3, 4 & 5

FIRESIDE STORIES compiled by Veronica S. Hutchinson
JEROME ANTHONY by Eva Knox Evans
NECESSARY NELLIE by Charlotte Baker

Group Four – Grades 4, 5 & 6

CASCO by Gladys Adshead
CHILDREN OF THE HANDCRAFTS by Carolyn Sherwin Bailey
CHILDREN OF THE NORTH LIGHTS by Ingri and Edgar Parin d'Aulaire
CHI WEE and LOKI OF THE DESERT by Grace Moon
CHRISTMAS ANNA ANGEL by Ruth Sawyer
COUNTRY-STOP by C. S. Bailey
DAY ON SKATES, the Story of a Dutch Picnic by Hilda Van Stockum
DEBBY by Siddie Joe Johnson
FAIRIES AND CHIMNEYS by Rose Fyleman
FLOATING ISLAND by Anne Parrish
HESTER & TIMOTHY—PIONEERS by Ruth Langland Holberg
HOW THINGS WORK by Creighton Peet
INDIAN BOYHOOD by Charles Eastman
LIN FOO and LIN CHING by Phyllis Ayer Sowers
LITTLE HOUSE IN THE BIG WOODS by Laura Ingalls Wilder
LITTLE LUCIA by Mabel Louise Robinson
LITTLE NAVAJO BLUEBIRD by Ann Noland Clark
ONE DAY WITH TUKTU by Armstrong Sperry
PACO GOES TO THE FAIR by Richard C. Gill and Helen Hoke
RAIN OR SHINE (Story of the Weather) by Marian E. Baer
SIDSEI LONGSKIRT AND SOLVE SUNTRAP by Hans Aanrud
THIMBLE SUMMER by Elizabeth Enright
TIRRA LIRRA by Laura E. Richards
UNDER THE TREE by Elizabeth Madox Roberts
WAGTAIL by Alice Crew Gall and Fleming H. Crew
WHO GOES TO THE WOOD by Fay Inchfawn
WILD, WILD WEST by James Daugherty
WINNEBAGO BOY by Mario and Mabel Scacheri
WONDER CLOCK by Howard Pyle

Group Five — Grades 5, 6 & 7

BENJAMIN FRANKLIN by Enid L. Meadowcroft
BLUE WILLOW by Doris Gates
BY SHORES OF SILVER LAKE by Laura Ingalls Wilder
COTTAGE AT BANTRY BAY by Hilda Van Stockum
EAST OF THE SUN AND WEST OF THE MOON by Ingri & Edgar Parin d'Aulaire
ENCHANTED CASTLE by E. Nesbit
FARMER BOY by Laura Ingalls Wilder
HELLO THE BOAT by Phyllis Crawford
I AM A PUEBLO INDIAN GIRL by Louise Abeita
KERSTI AND SAINT NICHOLAS by Hilda Van Stockum
LONG WHITE MONTH by Dean Marshall
MOUSEKNEES by William C. White
ON THE BANKS OF PLUM CREEK by Laura Ingalls Wilder
PEGEEN by Hilda Van Stockum
SATURDAYS by Elizabeth Enright
SATURDAY'S CHILDREN by Helen Coale Crew
SPANIEL OF OLD PLYMOUTH by Margaret and Helen Johnson
STRANGER IN PRIMROSE LANE by Noel Streatfeild
SWIFT FLIES THE FALCON by Esther Melbourne Knox
TOPOGALLANT, A HERRING GULL by Marjorie Medary
TREASURE FLOWER by Ruth Gaines
TWENTY LITTLE PETS by Raymond L. Ditmars
Group Six — Grades 6, 7 & 8

BALLET SHOES by Noel Streatfield
CIRCUS SHOES by Noel Streatfield
JAMBA, THE ELEPHANT by Theodore Waldeck
LUCKY SIXPENCE by Emilie and Arthur Alden Knipe
RING OF THE NIBELUNG by Gertrude Henderson
WILD WINGS by Julie Closson Kenly

Group Seven — Junior High School

RIVER RISING! by Hubert Skidmore
WINTERBOUND by Margery Bianco