This paper deals with the environment within the family structure and its relationship to literacy. The contents include: "Parent-Child Studies," which cites studies related to environmental influences on the development of reading readiness, parents' attitudes and reading achievement, parent involvement and education, television and parental home assistance in teaching reading skills, verbal productiveness of lower class children, and adult attention and language facility of children; "Kansas City Parent-Child Program," which discusses a reading program designed for five- and six-year-old kindergarten children in which the parents taught their children reading readiness and reading skills; "Causes of Illiteracy," which discusses physiological attributes, mental capacity, emotional stability, educational factors, and environmental factors; and "Action for Parents," which is a scale designed to show which parents are and which parents are not providing a social and physical environment in the home which will promote the child's reading behavior. (WR)
The word familial means either (1) "of or pertaining to a family," or (2) "appearing in individuals by heredity" such as a familial disease. The two meanings of the word familial present a dilemma for a writer. He cannot deal exclusively with the causes of illiteracy "pertaining to the family" without being accused of ignoring the effects, if any, which heredity plays on learning. On the other hand, he cannot deal satisfactorily with causes of illiteracy "appearing in individuals by heredity" without being asked to support his claims with scientific evidence -- of which there is practically none.

Inherited characteristics, of course, may or may not play a part in causing illiteracy. That is a topic with which the Jensen's and Shockley's can deal. The content of this paper, however, deals with the environment within the existing family structure, an environment which, when controlled almost invariably increases learning and literacy. Behavioral scientists have provided enough knowledge of the family environment so that fairly accurate predictions can be made as to whether or not children will be literate. The causes of reading disability are varied and often interrelated for an individual child. But making certain provisions in the child's early home life can often mean the difference between literacy and illiteracy.
The following discussion, then, includes (1) a brief review of parent-child studies concerned with reading and reading readiness, (2) a description of the Kansas City Parent-Child Reading Program, (3) a list of the causes of illiteracy, and (4) a list of provisions which can be made to prevent illiteracy.

**Parent-Child Studies**

The cognitive and affective development of a child begins with his own parents, in his own home. The influence is irrefutable. Even the most advanced compensatory program or the most elaborate cultural enrichment program cannot negate or reverse the ultimate influence of a parent on his child. It would be difficult to overstress the importance of the home environment in preparing a child for the experience of reading. Parents play a large role in developing emotional attitudes, physical growth, and the beginning of language skills. Parents can stimulate a child's early awareness of, and interest in, reading.

Lawrence Kasdon described some of the research findings on physical, intellectual, emotional, and educational factors which cause reading difficulty. It was emphasized that the causes of reading failure rarely occur in isolation. Engle did point out that the underachieving syndrome is rooted in the home and environment.

Hess studied the effects of environmental influences on the development of reading readiness. It was assumed that the effects of social, cultural, and economic factors on a preschool child
are mediated, in large part, through adults closely involved in the child's life. Hess found that children were affected by (1) the degree of crowding in the living quarters, (2) the use of home resources by the mother to aid the child's cognitive growth, (3) the mother's participation in outside activities, (4) the amount of time a mother reads to a child, (5) the mother's feelings of effectiveness in dealing with life, (6) maternal teaching style when attempting to show the child how to do something, and (7) to some extent the mother's own language facility. In general, the studies show that causes of reading problems varied with personal attitude and behavior, the absence of books in the home, the amount of language stimulation, the amount of visual perception, and inadequate experience opportunities.

Grayum shows how parents' attitudes, whether positive or negative, affect children's reading achievement. Parents can help their children by making reading an essential part of the home life, providing pleasant and satisfying experiences with reading, and placing a high value on reading in their own lives. A positive parental attitude and involvement with the child produces good results.

At the Drexel Institute of Technology the Early Childhood Center provides an observation laboratory for students, conducts research in human behavior and development, supplements the child's home environment and provides learning experiences for parents who are required to be directly involved.

In Appalachia a successful program focused on behavioral deficits and parent attitudes. A preschool program stressing language development, experience building, and readiness activities by providing education experiences for both parent and child was successful in California.
The parent program stressed child growth and development, nutrition, health, and preschool education.

Giammatteo found that learning behavior of children from low income families is affected by their preschool and early school experiences. He suggests training parents which alleviates the poor reactional behavior as well as having a positive effect on inter-personal and intra-personal behaviors which affect learning.

A community cooperative nursery school in Menlo Park, California involves mothers in the preschool education of their children. The role of a good kindergarten in the mental, physical and social development of the child and the importance of parent involvement to the sound foundation of learning is stressed. Where parents were involved with their Head Start children, the children improved in the areas of awareness and self-acceptance, development of interest levels and curiosity, and readiness for more formal instruction. The importance of the preschool experience on the personal and social adjustment and school readiness and achievement of the deprived child was shown to be a significant factor in "An Evaluation of the Preschool Readiness Centers." More important, the children whose parents were actively involved showed even greater achievement.

Cook says that besides knowing the various techniques and materials which can be used by a parent to help his child in reading, the parent must be aware of other ways in which he can assist his child -- physically, mentally, socially, and emotionally. He can help his child grow through his reading as well as in his ability to read.

The conditions of student life and the individual child's need for identity and self-esteem and sense of personal worth and potency also
can effect the student's readiness for learning. The description of a program in Harlem includes parent involvement and describes how the program fosters self-esteem for pupils within the traditional public school setting.

Television and parental home assistance can be useful in teaching reading skills, especially the studies cited are especially useful in their use of parental reinforcement activities. "Sesame Street" reports improving self-concept, general concept development, and the development of specific perceptual skills as the language and prereading goals of the program.

The difficulty in performing cognitive tasks necessary for success in school situations was found to be related to the lower verbal productiveness of lower class children. It was found in the Malabar Reading Program that the development of both reading and oral language skills was necessary to self-regulated learning behaviors. Adult attention is an important contributing factor to language development in children because teaching machines do not increase the needed language facility of the learner.

In general, reading proficiency is affected by the variables of race, sex, chronological age, family head's educational level, intelligence and socioeconomic status.

Jablonsky writes about the importance of preschool development of language ability and learning readiness and the importance of parent involvement in the educational process. If parental behavior directly influences the child's reading skills, if early and intensive parental stimulation
is a factor in the gifted child's intelligence, then, "focusing on mother and child, is one of the most highly productive ways to improve the educability of the young child."

Kansas City Parent Child

Kansas City Parent-Child Program

Waiting until a child is five or six years old to start providing a home environment conducive to the learning of reading is waiting about five or six years too long. "Better late than never" was the watchword in Kansas City where a program was designed for five and six-year old kindergarten children. Mothers taught their children reading readiness and reading skills from May to September, and in almost every case the child learned to read.

The Kansas City Parent Child Reading Program grew out of the belief that a group of parents -- for the most part poor and undereducated urban mothers -- can use a structured tutoring program in reading to teach their own children how to read. Even the tutor trainers who showed the parents what to do came from the target population. In addition, the training film which showed how to use the tutoring system featured mothers and children -- all from the target population.

The training program was taken to the parents rather than visa versa. Training sessions were held in locations as close to the parents as possible. These locations included an inner-city public school, Garrison Elementary School; a high rise low-rent inner-city apartment complex, Wayne Miner; and an industrial plant on the outskirts of the city, the Kansas City works of the Western Electric Company. For three weeks in May the
parents attended six one and one-half hour training lessons for a total of nine hours of training. After the second lesson, the parents from Garrison and Wayne Miner learned that they would receive forty-two dollars each for participating in the entire training program. Attendance increased considerably. In June, two one and one-half hour "brush-up" review sessions were held so that parents could demonstrate their ability to use the Tutor-Student LSystem with their children.

To study the effects the program had on the children a simple pre-test, post-test control group, experimental group design was used.

1. Children from each location were pre-tested in May with the following tests: (a) Boehm Test of Basic Concepts, (b) Lee-Clark Reading Readiness Test, (c) Wide Range Achievement Test (Reading Section), and (d) Wechsler Preschool and Primary Scale of Intelligence (WPPSI) - Verbal, including sub-tests on Information, Vocabulary, Similarities, Comprehension, and Sentences.

2. Seventy-four children were randomly assigned to experimental and control groups. Fifteen to the Garrison experimental group; fifteen to the Wayne Miner experimental group; fifteen to the Western Electric experimental group; eleven to the Garrison control group; nine to the Wayne Miner control group; and nine to the Western Electric control group.

3. Experimental group parents tutored their children for the summer months using the Tutor-Student System in Beginning Reading.

4. Observation visits to the homes of all parents and children were made.
5. All children were post-tested at the end of the summer. Results of the t test for statistical difference indicated that the overall mean scores of the experimental groups were higher than that of the control groups at the .01 level of significance.

The results of the summer parent-child tutoring program, then, indicate a significant increase for experimental group children over control group children. In fact, the actual lead in reading achievement the parent-tutored experimental group children had over the other children was, on an average, about seven months.

Questionnaire data was compiled so that relevant trends with respect to the various groups could be studied. The control groups and the experimental groups are separate, and the numbers represent, (1) Garrison, (2) Wayne Miner, and (3) Western Electric.

It should be noted here that although the correlations derived from the data represent valid trends within and between the groups, the questions were most probably answered cautiously by most parents, either exaggerating or diminishing their responses as it seemed most appropriate for purposes of the study. Therefore, the actual numerical data is not as important, statistically, as the generalizations and inferences which may be drawn from the intra-group categorical response to a given item.
Questionnaire Data: Intra-Group Means

1. Garrison
2. Wayne Miner
3. Western Electric

<table>
<thead>
<tr>
<th></th>
<th>Control 1</th>
<th>Control 2</th>
<th>Control 3</th>
<th>Experimental 1</th>
<th>Experimental 2</th>
<th>Experimental 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVERAGE VERBAL I.O.</td>
<td>86 83 100</td>
<td>90 81 96</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVERAGE AGE OF MOTHER</td>
<td>28 27 26</td>
<td>33 27 28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVERAGE NUMBER OF SIBLINGS</td>
<td>4.5 3 .8</td>
<td>3307 3.4 9306</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVERAGE YEARLY INCOME</td>
<td>1400 2400 8300</td>
<td>3200 * 9300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVERAGE EDUCATIONAL LEVEL OF PARENTS</td>
<td>8.5 10.5 12</td>
<td>9.4 9.9 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVERAGE EDUCATION DESIRED FOR CHILD</td>
<td>12 16 16</td>
<td>14 14.8 16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVERAGE NUMBER OF BOOKS IN HOME</td>
<td>8.8 12.5 15</td>
<td>14.5 15.8 18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How many times do you read to your child each week? 1.8 3.5 2 2.6 2 3.6
How many times does your child use paper and pencil/week? 3 3.5 3.5 4.4 2.7 4.3
How many times does your child cut and paste/week? 1.5 2.5 1.5 2.5 2.4 3.1
How many hours do you watch T.V. each day? 5.5 3.5 2 3.4 5.1 2.3
How many hours do you read each week? 5.5 3.5 3.5 2.8 3.1 3.6
How many times does your child watch cartoons each week? 6 7 4 4.7 5.2 5.5
How many times does your child watch Sesame Street? 0 2.5 1 1.2 1.5 2
How many hours does your child watch other T.V. shows/day? 3.5 2.5 1.5 1.8 2.8 1.6
How many times do members of your family argue each day? 6 6 1 4.4 7.4 3.6
How many times do you hit or spank your child each week? 5.5 3.5 1.5 2.8 4 2.4
How many times do you praise your child each day? 2.5 3.5 3 2.6 3.4 3.8
How many times do you raise your child's self-esteem each day? 2.5 2.5 2 1.5 1.8 2.5

*Only 50% of the mothers responded to this question and the cumulative average of these responses does not represent the actual average income of this entire group.
A number of trends might be considered in the questionnaire data.

1. Verbal intelligence quotient scores
   a. amount of television watched by Mother
   b. amount of television watched by child
   c. number of arguments in the family
   d. amount of physical punishment administered

2. Income and educational level are inversely proportional to:
   a. number of children in the family
   b. amount of television watched
   c. amount of physical punishment administered
   d. number of arguments in the family

3. Income and educational level are directly proportional to:
   a. number of books in the home
   b. amount of reading done by Mother

4. If the arbitrary assignment of positive and negative denotations is made to each specific category, then the Western Electric groups, both control and experimental, represent the positive extremes. Categorically, the children in these groups:
   a. were read to more frequently
   b. used pencil and paper more often
   c. used scissors and paste more often
   d. watched television less frequently
   e. were spanked less frequently
   f. were involved in less frequent family arguments
   g. had fewer siblings
   h. were praised more frequently
   i. had more books in their homes
j. had parents with higher educational achievement levels
k. had parents with higher income levels
l. had significantly higher verbal intelligence quotients
m. had parents who indicated the highest educational aspirations for their children

Causes of Illiteracy

The preceding studies may encourage certain individuals to look for a simple cause for illiteracy. Too much television, too few books in the home, too little reading done by parents, etc. may be cited as the cause. Such answers are much too simple. Reading is a complex process and the causes of illiteracy are usually quite varied and intricately inter-related.

Consider each of the following categories for the cause of illiteracy before offering simplistic answers. On the other hand, answer each of the questions which follows and pursue a logical course of action with the parents and children you know.

1. Physiological Attributes
   ---General Health - How much do you know about the child's general health? Is he functioning well enough physically to attend to the learning activities that are planned? Did poor health during his early development keep him away from important learning experiences?
   ---Eyes - Do you know how well the child sees? Can he see regular sized print held at arms length? Can he see material at a distance which you expect him to see? How do you know for certain what each child can see? Does the child seem to get eye strain when doing close work? If so, do you or someone on your staff know how to give vision screening tests for
including tests for eye muscle defects such as esophoria and exophoria?

---Ears--- Can the child hear what you say to him? Can he understand your dialect? Can he discriminate between subtle sound differences in words such as "top" and "tot" as well as "fad" and "fed?" How do you know for certain what each child can hear? Are you familiar with the use and principle of the audiometer? Do you know how to give and interpret the Wepman Auditory Discrimination Test?

---Speech--- What is the relationship of the child's speech and his hearing ability? Are the speech differences you detect simply differences traced to a dialect different from yours? If so, are you making a value judgment about the worth of your dialect and the child's? Should we put first things first? Is learning how to read more important than learning -- if it were possible -- a dialect like yours?

---Motor Activity--- Did you ever consider that the child may never have had a pencil in his hand? Does the child know that words are words or that one reads and writes letters in words and sentences from left to right? How do you know the answers to these questions? Why must they be answered before instruction is begun?

2. Mental Capacity

Do you know that two-year old children of average intelligence have been taught to read? Do you know that older children with a mental age of two years would probably be institutionalized and not in a conventional classroom? And that, therefore, older children in conventional classrooms are bright enough to learn to read? Do you know that a child who talks can learn to read?
3. **Emotional Stability**

Do you know that inability to read can cause emotional problems and visa versa? Do you try to determine in your own mind the causes of a child's fingernail biting, inattentiveness, self-consciousness, aggressiveness, tattling, stuttering, sullenness, mischief-making, meandering, talkativeness, hyperactivity, and apparent laziness?

4. **Educational Factors**

--- **School Entrance Age** - Did the child enter first grade at an age much younger than the other children? How did this age deficit affect his elearning development and especially his ability to relate to classmates in his early years or in the important teenage identity years?

--- **School Attendance Record** - Were there factors which did not permit the child to attend school regularly when he was younger? How much schooling was missed? What were the reasons for a poor attendance record?

--- **School History** - Can you determine whether the child met with either more successes or more failures during his school career? If so, what is the approximate percentage of each? Were little failures or big failures in school embarrassing or even traumatic? Do you realize that previous experience with school conditioned him to either succeed or fail? In what subjects did the child succeed? In what subjects did he fail? Why was there failure in certain school subjects and not in others? In school were the instructional steps programmed for the class rather than for the child? Were papers continually returned with items marked wrong? What effect did these types of papers have on the child? Was he given books that he could not read?
5. Environmental Factors

---Home Background - What effect did the child's parents have on his reading ability? Did his parents value reading? Did they read to the child when he was in his early years (e.g. six months of age to six years)? Did he have books of his own? Did his parents read? Did his parents have books, newspapers, and magazines in their home? What type was there much conversation in the home? What type of and how many television programs were watched? Was there printed material such as labels, charts, maps, pictures, with captions, notes, recipes, directions, etc. about the home? Were the parents and siblings supportive rather than punitive to the child as he developed?

---Experience Background - How much does the child know about various aspects of life? Are his experiences or interests in only a few areas rather than in many areas? How much does he know about the world outside his immediate neighborhood? How much does he know about history, science, literature, music, art, people, medicine, consumer economics, home economics, mechanics, travel, etc.? Were his experiences real or vicarious? Where did he get his experience (from books, television, movies, discussion, real life)? What can fill the gaps in the experiential background of the child? What effect does experience background have on word recognition? On reading comprehension?

---Linguistic Background - Does the child have a bilingual background? If so, does he use a different language at school than at home? Does he, or did he ever, have a speaking, listening, or reading knowledge of the language? What levels of proficiency in the other language did he achieve? At what stages in his development did he use the other language? How much of
an influence is the other language at this point? What value does the child place on his knowledge or experience with another language? How has the bilingual background affected his learning to read English? Has the use of a different dialect (e.g. "Black dialect" or Bostonian dialect) or usage had any effect on his learning to read? What methods of teaching reading take into consideration, and even honor, the child's dialect and English usage? What methods should not be used? Are these methods being used?
Actions for Parents

Knowledge of the effect parents have on the reading development of their child and knowledge of the action parents can take to prevent the child from becoming an illiterate is useless knowledge indeed unless we take positive action ourselves. The following scale is designed to show which parents are, and which parents are not, providing a social and physical environment in the home which will promote the child's reading behavior.

* * *

Literacy Prediction Scale

Directions:
1. Ask parents to respond to each item.
2. Total the numbers marked on the scale and divide by the number of items answered.
3. Check rating below.

Likelihood of child's becoming a proficient reader.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1.9</td>
<td>very poor</td>
</tr>
<tr>
<td>2-3.9</td>
<td>poor</td>
</tr>
<tr>
<td>4-5.9</td>
<td>fair</td>
</tr>
<tr>
<td>6-7.9</td>
<td>good</td>
</tr>
<tr>
<td>8-10</td>
<td>very good</td>
</tr>
</tbody>
</table>

4. Help parents raise rating of individual items, if appropriate or possible to do so.

CIRCLE THE NUMBER THAT FITS YOUR ANSWER

<table>
<thead>
<tr>
<th>None/0</th>
<th>Very little/1</th>
<th>Some/2</th>
<th>Much/3</th>
<th>Very much/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Sometimes</td>
<td>Frequently</td>
<td>Often</td>
<td>Always</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
<td>6</td>
<td>7</td>
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<td>9</td>
</tr>
<tr>
<td>10</td>
<td></td>
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</tbody>
</table>

1. How often did you read books and stories to your child?
2. How often did you try to teach your child to say words he did not know?

3. How often did your child watch children's programs such as Zoom, Sesame Street, The Electric Company, Captain Kangaroo, Mister Eoger's Neighborhood?

4. How much high school training did you have?

5. How much time passed each day without arguments involving one or both parents?

6. How often did you praise your child for something he wrote or drew?

7. How much more money did you earn than the other people in your neighborhood?

8. How much college education do you want your child to have?

9. How much did your child work with pencil and paper at home?
10. How much magazine reading took place in your home?

0 1 2 3 4 5 6 7 8 9 10

11. How much time did you spend with your child talking about what was interesting to him?

0 1 2 3 4 5 6 7 8 9 10

12. How much time did you yourself spend reading at home?

0 1 2 3 4 5 6 7 8 9 10

13. How much have you tried to teach your child reading such as letters, signs, labels, his name?

0 1 2 3 4 5 6 7 8 9 10

14. If having twenty children's books is about the average, how much reading material did your child own?

0 1 2 3 4 5 6 7 8 9 10

15. If having fifty adult books is about the average, how much reading material did you have in your home?

0 1 2 3 4 5 6 7 8 9 10

16. How often did you talk with your child rather than hitting or spanking him for something he did that was really bad or wrong?

0 1 2 3 4 5 6 7 8 9 10

17. How much brighter did you think your child was than the other children you know?
18. How much does your child succeed in difficult tasks he tries to do?

0 1 2 3 4 5 6 7 8 9 10

19. How much time did your child have to work by himself at home without being disturbed by others?

0 1 2 3 4 5 6 7 8 9 10

20. How much time would you be willing to spend teaching your child reading if you learned how to do so?
Taking positive action implied in each of the above items could spell the difference between a child who reads and a child who is illiterate. How well the child reads determines how well he is able to perform in school and in many other areas of life as well. Study after study shows that a child's reading ability can, and is, largely determined by how skillfully his family encourages him in the area of reading. Providing a very young child (six months of age is not too young) with an environment which will stimulate reading growth is probably the best insurance against illiteracy. Early successes and pleasant associations with reading are good predictors of later successes. Early failures and either unpleasant or insufficient associations with reading are good predictors of later failures.

It is our job, then, to show parents how to provide early successes and pleasant associations with reading of for their children. Publications, counseling sessions, informal discussions, and parent training classes can all be used to get practical information to parents before it is too late -- the point at which the child is in school and irreparable damage has been done. Geneticists may someday determine the limits within which human potential must remain. Parents, however, will continue to structure the environment which either forces the child to soar crawl or enables the child to soar. And soaring sure beats crawling.
REFERENCES

1. Monroe, Marion, Growing Into Reading: How Readiness for Reading Develops at Home and at School, Scott, Foresman, and Co., 1951.


26 Johnson, Joseph C., "An Analysis of Reading Proficiency and Its Improvement in University Accepted Rural Secondary Students," paper presented at the National Reading Conference, Atlanta, Ga., Dec. 4-6, 1969.


28 San Diego County Dept. of Education Monograph 4, "An Inventory of Reading Attitude." Improving Reading Instruction, 1961.
