AN EVALUATION OF INTEGRATED TEACHING

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AN EVALUATION OF INTEGRATED TEACHING

THESIS

Presented to the Graduate Council of the North Texas State Teachers College in Partial Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

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August, 1943
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CHAPTER I

INTRODUCTION

Statement of Problem

The study of integration as a workable means of developing the well-rounded child is one of vital importance today. In a time when disrupting forces are so prominent, the school has been challenged to produce for society individuals fully capable of living their lives to the fullest and adjusting themselves to every situation they may encounter. A thorough knowledge of integration then, and an understanding of how its application will answer their challenge is a need of every classroom teacher. It is the problem of this thesis to delineate for classroom teachers those factors which contribute toward integratedness in the elementary child.

Purpose of the Study

The purpose of this study is to examine integration in such a manner as to determine its true meaning, to analyze critically its ability to meet the challenge and produce the goals which society and the teacher have set
up, and to conclude whether the utilization of integration, as conceived by the writer, will develop the child's capacity of self-expression, encourage critical thinking, develop individual aptitudes, and help him make wholesome adjustments to the group.

Sources of Data

Primary-source data for the study were secured from twenty-two children in the first grade of the Vandiver Elementary School of Temple, Texas, while the secondary sources included reading from professional books, magazines, journals, and a study of curriculum bulletins.

The writer taught these children during the school year of 1942-1943. With the exception of three children, one a Mexican child, further handicapped with language difficulty, and two children who were impeded by speech defects, the group of ten boys and twelve girls had good home backgrounds, although five were children of army people who were compelled to move frequently and who were now at Camp Hood, near Temple. However, the fact that these children had lived in several states added greatly to their experiences and to the experiences of the group and this helped to compensate for their mobility. The group was given the California Test of Mental Maturity as one means of evaluating the outcomes of the study. The test was supplemented by individual case histories of the children.
Plan of Study

The study has been organized into five sections. Chapter I introduces the study with a statement of the problem, the purpose of the study, the sources of data, and the proposed treatment of the data.

Chapter II contains an analysis of integration, its definition, its purpose, its effectiveness in operation, and its value as criticized by professional educators and as revealed in related studies.

Chapter III presents the classroom activities and the procedure followed.

Chapter IV includes case studies of the twenty-two first-grade children as well as the mental age, chronological age, intelligence quotient, and grade placement of each.

Chapter V presents the writer's conclusions.
CHAPTER II

THE CASE FOR INTEGRATION

Integration is the act, process, or result of internal unification, characteristic of an organism, and which, when merged with environment, brings about an integrating process of learning. By integration in education, in the past, we meant the making of a whole from constituent parts, but we now speak of an integrated whole and not of an integration of parts.

L. T. Hopkins says that "integration refers to continuous, intelligent, interactive adjusting. All living is interacting, adjusting behavior."¹

The child is constantly interacting with his environment, and since life is an ongoing process; education should be concerned with the improvement of life and living. There must be purposeful behavior, directed toward goals, consciously formulated in the process by the individual as he realizes his disturbance. Intelligent behavior implies purposeful behavior. Then integration must be the description of the process involved in this intelligent, interacting, adjusting behavior.

The integrating behavior should be interpreted to refer to the quality of the relationship existing between the various aspects of the whole organism. Since these aspects are working harmoniously toward the desired end, the individual acts as a balanced whole. Integrating behavior in any situation is that behavior in which the individual begins with and carries through to the end an internal wholeness.

Hopkins describes the integrated individual as follows:

1. Makes wide contact with the environment.
2. Approaches the ensuing disturbances or problems with confidence, courage, hope, optimism.
3. Collects, selects, and organizes material for the solution of these problems.
4. Draws relevant conclusions.
5. Puts into practice the conclusions in changed behavior.
6. Takes responsibility for the consequences of his behavior.
7. Uses feelings either as instruments or ends as compatible with the preservation of wholeness.
8. Organizes pertinent aspects of his successive experiences so that they are better available for use in subsequent experiences.²

²It has already been said that the education of a child is inclusive and continuous; it goes on all the time, and takes place through his environment. The most important aspects of his environment are the other individuals with whom the child has association. He gets his ideas of the democratic life from his social contacts; this we call the good life. People of all nations have and are struggling
for the good life as it appears to them in their situation. Thus it is a growing, changing, developing affair that is never fully achieved, but which is always in the process of becoming. With this idea in mind we can easily understand why we place the emphasis on the process of living and why we believe in intelligent, interactive, and continuous adjusting.

In the beginning we want to understand that the achievement of any end which cannot be accomplished by the democratic process is usually not worth achieving and that cooperative social action is the chief characteristic of the democratic process. Thus we realize how the child is to live by means of an environment instead of in an environment. He must perform his part in assuming full responsibility for the group achievement in cooperating with the group plan.

In the democratic process each individual is to improve his thinking in real-life situations which is one of the goals to be attained. When a few people do the thinking, get the answers, and impose their ideas upon other individuals, we have autocracy, not democracy. Then the theory of learning must support our idea of the democratic process of cooperative interaction. It must be directed toward all-round growth of both young and old under intelligent freedom, rather than acquiring fixed knowledge.
selected by the teachers with the answers in advance. This theory of learning must fit in with the accumulating information about organic growth, or how organisms attain integrative individuality in their culture.

The emphasis has shifted from the subject matter to the pupil, from the thing to be learned to the learner, from what is to be done to the pupil to what he does for himself. Thus we have a new view of education upon which to build a curriculum conducive to integrated teaching. This being the case, the needs and interests of children with both integrated and disintegrated personalities must be met.

Integrated teaching will show progress in the schoolroom to the extent that the school curriculum is organized to make it possible for the individual to get a certain wholeness in a well-organized curriculum embodying the cultural and spiritual values of our racial heritage which cannot be ignored or broken up without sacrificing a dynamic source of personal integration. A research specialist should do his work with the idea in mind to achieve greater reinforcement of the whole.

Kilpatrick says:

Progressive education, if it is worthy the name, founds itself on the total learning effects, not on part only. It, therefore, stresses life and experience, learning richly under careful teacher guidance. Only thus can we hope to call into play all sides of
personality. Only as the whole child is given all-rounded experience can we hope to build the richer and finer personalities that we all wish.  

Personality factors need to be improved upon in our integrated curriculum, since in the end everything turns on the life of the individual. However, it seems that the primary consideration at the present is social. The ill balance of external forces at the very moment overwhelms our immediate problems of personality integration. Then it becomes the business of the school to help the child to develop dynamic stability in a succession of disturbing situations. The development of personality is the richness of internal individuality, which is recognized externally as richness of personality.

Each child should have a sense of security, a feeling of being recognized, a sense of belonging to the social groups in and out of school, a sense of being wanted as a member of each group, and a sense of achievement which arises when he attacks a task which seems meaningful, worthwhile, and within his ability, and carries that task on to conclusion. If he attains success, he should reach satisfaction without vanity; if he fails, he should be led to analyze the causes of failure and to renew the attempt without discouragement. Thus such elements would show that the child had an integrated personality.  

Cornelius Jaarsma says:

It is through the continuous remaking of the total personality of the individual that an integrated curriculum acquires its personal significance.

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3W. H. Kilpatrick, "What Do We Mean by Progressive Education?" Progressive Education, VII (December, 1930), 386.

4R. H. Lane, The Teacher in the Modern Elementary School, p. 12.
An organized, graduated, and directed curriculum takes account of the child's needs and interests to further his active endeavors of achievement. The learner enters into an integrated social heritage to realize himself in it and develop his own powers for improvement and reconstruction.  

Integrated teaching strives to maintain a balance in the individual by getting and keeping him together. Therefore, the teacher must have a curriculum which is well planned and well organized. It should then be made by all those concerned with the activities of the life of the children while they are in school; the children themselves, the teachers, the parents, other educators, and citizens of the community all should cooperate in developing the program. This means that the school is to help the children make their curriculum as intelligently as possible at their age. In fact, the curriculum must be as flexible as life and living, and as broad as life itself. It must be made to fit the situation as the intelligent pursuit of democratic goals is reached.

The integrated curriculum is planned to provide better selection and organization of teaching materials and to promote better methods of teaching and learning. Moreover, it is organized in such a way that the teacher may find readily at hand the proper aids and subject matter content for directing the learning processes, to the end that better unification and greater integration of learning may be achieved.

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Integrated teaching does not mean to belittle the ability to acquire and use facts and principles. Formerly there was an inclination to overvalue information, but now there may be some tendency to undervalue it as a basis upon which thinking operates.

According to Leonard and Burich:

The educational process should include the acquisition of facts or principles but should go beyond their mere memorization to the extent of utilization in the solution of problems or situations that are of real concern to the student. This calls for the development of an appreciation of the part facts play in the solution of problems; for the development of the ability to assemble pertinent data, to scrutinize them carefully, to draw inferences only that the data warrant; and for the development of the ability to see relationships. These purposes require the provision of experiences that lead to the development of citizens who have learned how to think for themselves and then how to act for themselves. The results of many studies on learning indicate that the meaning of facts or principles is dependent upon the richness of the pupils' experiences, upon the consequences for which they are used, upon the development of the ability to see relationships in his experiences and to systematize his experiences.7

Integrated teaching attempts to give desirable learning experiences such as many good attitudes, as well as certain scientific and social concepts. Since it is an accepted fact that children learn more readily by doing and we are dealing with children alive with curiosity and a desire to act, we find it most important that we approach the learning situation through the means of these normal

avenues. To make the most of the child's present background, these interests and curiosities must be kept alive and growing. Growth comes through experience, and through experience a child develops in understanding. Therefore we must recognize the value of a program based on real, live activity, which provides these opportunities. Thus our area of living develops from a background of true-life experiences within the child's environment and expands into the following area which is his next step in growth.

The type of learning should provide for social experiences and many social contacts within the whole group as well as various small groups. It should challenge good thinking and provide for the development of personality and improved conduct through its socializing opportunities. Not only should enlarged understandings be brought about through the experiences afforded, but also opportunities for personality integration through improved attitudes and appreciations should be attained. The type of learning should allow for growth in all phases of individual development and help the child adjust himself to new situations in life.

If children are to have such learning experiences, much attention should be given to the curriculum.

Hopkins gives us, in his "seventeen points," a master picture of curriculum implications:
1. The curriculum must be concerned with aiding individuals to improve their life and living.
   2. The test of improvement lies in the integrating effect upon behavior.
   3. The center of improvement is in the process of interacting within which lie the evolving ends and means.
   4. The process should lead to action increasingly based upon critical thinking.
   5. All learning is essentially creative experiencing in which the learner, under guidance, evolves goals, formulates and executes plans, evaluates results, and incorporates accepted learnings into his value and attitude system to act with and upon in subsequent experiences.
   6. The refinement of meaning, values, and attitudes is essential to increasingly intelligent behavior.
   7. Meanings, values, and attitudes are best developed, tested, and refined in the matrix of social reality.
   8. Social situations which an individual is unable for any reasons to act upon intelligently become psychological unrealities and tend toward disintegrating behavior.
   9. Study is managing a situation better to deal with it more intelligently.
   10. Since life is changing and individuals are growing in ability to manage it, a curriculum cannot be fixed in advance, but must be as flexible as intelligent living.
   11. Each individual must find the curriculum a means of aiding him to meet with increasing satisfaction his biological, social, and self needs; otherwise thwarting emotions inimical to integrative behavior will result.
   12. The curriculum of each individual must be kept at all times within the potentialities of his inherited nerve and endocrine mechanisms.
   13. Adults must grapple more vigorously and thoughtfully with all aspects of the culture in order to change the conditions which prevent the growth of intelligent behavior of children. This experience should be shared with children whenever, wherever, and to such degree as will promote their integration.
   14. In all behavior, the organism acts as a whole to serve ends of the whole.
   15. All organic behavior is purposive; all conscious behavior is purposeful. The stimulus value of a situation is not inherent in the situation, but in
the relationship between it and the satisfaction of a purposeful goal.

16. Effort implies strain toward an end. It increases with the purposefulness of the goal and decreases with the purposelessness of the goal.

17. Success is continuing more intelligently the process of interactive adjusting.8

It should be kept in mind that the curriculum should emphasize social living and be sure that an adequate program of socialization is being carried on. From such a setup coordination of teaching activities toward promoting the continuing social development of the pupils should be in evidence. This program must create attitudes and techniques essential to guiding the cooperative thinking and acting of children, and is one which cannot be imposed by an administrator. It takes time for a program of purposeful activity, which is of value to both pupil and teacher, to replace subject matter, mastery learning. A socialized program increases the teacher's role and influence when she is working with children in a real situation.9

In the five following evaluations of related studies the writer has found much favorable evidence for integrated teaching. The most outstanding evidence was found to be personality integration and the democratic process through which the intelligent interacting personality produces effective adjusting or living.

In 1942 Leonard and Eurich10 made an evaluation of some progressive programs of education. They admitted at the outset that the newer or more progressive programs and methods might not yield any better results than the traditional programs, but they suggested that there were reasons

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10Leonard and Eurich, op. cit., p. 270.
to hope that they would. In the first place the modern programs emphasize the close relationship between the school and the community to a greater extent than do the traditional programs. The modern schools show greater concern over finding materials of instruction that are meaningful to the learner. They attempt to organize information and insight around contemporary problems or broad fields of knowledge rather than academic specialties. And they seek to provide within the school a much greater amount of student participation and experience in democratic processes and organization.

Wrightstone\textsuperscript{11} made an evaluation in 1938 of the progressive schools which were using the activity program. He evaluated the outcomes of a number of schools to see whether the progressive type excelled the conventional type in objectives such as social relationships, individual aptitudes, critical thinking, appreciation of worthwhile activities, gaining use of common integrating experiences, and building sound physical and mental health.

In 1937 McGAughey\textsuperscript{12} in An Evaluation of the Elementary School, defined the principal function of the elementary school as the development of well-rounded personalities of

\textsuperscript{11}J. Wayne Wrightstone, Appraisal of Newer Elementary School Practices, p. 216.

\textsuperscript{12}J. R. McGAughey, An Evaluation of the Elementary School, p. 367.
young children, based on the psychology which recognizes the child as a unified, integrated human being. He minimized the subject-matter mastery, while the emphasis was placed on providing an environment in which the child would have a unified succession of related experiences which would be rich and purposeful and full of meaning to him in his particular stage of development. More credit was given subjective judgment than objective measurement, due to the fact that the latter fails to measure such qualities as emotions, feelings, and attitudes which are so important in democratic living.

In the study of the development, installation, and appraisal of a certain type of integrated curriculum in the educational program of the public elementary schools of Houston, Texas, in 1937, Oberholtzer came to some very definite conclusions:

Such development opens up a new field of supervision; affords an excellent means of appraising supervisory services; gives definite opportunity for development of professional leadership; creates new perspectives of the social functions of the school; becomes an effective means for the improvement of teaching; tends to rejuvenate the staff professionally from top to bottom; increases pride and effort on the part of those who crave new opportunities for improvement; and sometimes disturbs those who are too smug and complacent in their work.\(^\text{13}\)

Hollingshead,\(^\text{14}\) in his evaluation of *Guidance in*

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\(^{13}\)Oberholtzer, *op. cit.*, p. 133.

Democratic Living, makes it very plain that the success of the venture must be measured by the degree to which the pupils develop the attitudes and abilities essential to furthering democracy, that an accurate evaluation of such results is impossible because of the lack of objective measures. Evaluation can be made only in terms of whether the pupils have been growing in the direction of the objectives; the amount of growth cannot be determined. Therefore subjective judgments must be made.

It was observed that a distinct gain in a feeling of group consciousness had been attained, tremendous gain had been made in the direction of developing attitudes and abilities of effective thinking, and a gain was likewise apparent in cooperative acting. A reduction was noticed in the use of rules and penalties as a means of solving problems. The development of democratic leadership had been considerably strengthened.
CHAPTER III

INTEGRATED TEACHING IN THE FIRST GRADE

Since the area of living for the first grade is the home and the experiences connected with it, at the very outset of school the first-grade teachers of the Temple public schools bring in vacation with the family, then continue study with fun at home, and from there one activity grows out of another.

"Observing Our Pets" grew out of an interest in toys which began immediately after Christmas and lasted for seven weeks. This activity has a setting most familiar to a six-year-old. The love for animals seems very natural to little children, and the adjustment comes about easily. Therefore, this activity is developed from a background within the child's environment and expanded toward other areas of living.

Since social living is a very highly developed area of education, the problem on pets qualifies well as a part of this area, although it reaches into science to a considerable degree. It provides for social experiences and many social contacts. It challenges good thinking and provides
for development of personality and improved conduct through its socializing opportunities. Not only were enlarged understandings brought about through the experiences afforded, but also opportunities for personality development through integration and improved attitudes and appreciations were made possible.

Aims and Desired Outcomes

**Attitudes and appreciations.** -- In the study, investigations, and experiences of "Observing Our Pets" there were many attitudes and appreciations to be developed; a scientific attitude in the care of pets as to food, shelter and protection; a wholesome attitude toward reproductive habits of pets; an attitude of tolerance toward pets; intelligent respect for law as applied to pet animals in the community where such laws exist; a cooperative attitude toward the conservation of wild life; an appreciation of one's responsibility in having pets; an appreciation of the place taken by pets in music, art, and literature; an appreciation of the natural beauty of animals as to color, markings, and grace; an appreciation of animals in natural settings and the effects of nature on their development; and, finally, an appreciation of the joy and satisfaction gained from caring for and training pets as well as the devotion of pets to their masters.
Understandings. -- There are a great many understandings a child should have about his pets and some of them are: an understanding of the importance of scientific care; an understanding of the influence of nature in development and survival of pets and the importance of the natural environment; an understanding of the interdependence of animals, insects, and plants in nature; understanding the part played by modern science in the lives of pets, such as cat and dog hospitals, prepared pet foods, insecticides, and medicines; understanding common ailments of pets, their symptoms, causes and cures; understanding the meaning of most common sign language of pets and being able to interpret it intelligently; understanding the possibilities of training pets for purposeful enjoyment and employment, the circus and the army, for example; and understanding of the importance of health habits in relation to pets and protection of human health from undesirable conditions in animals, such as rabies, ringworm, and mange.

Essential abilities. -- Along with appreciations and understandings there are certain abilities to be attained: the ability to read simple experience charts, pre-primers, primers, and library books on pets; ability to relate stories about pets and read them from the board; ability to relate experiences with pets in the home and in outside experiences; ability to apply number understandings and
number concepts to experiences with pets; ability to take responsibility of caring for and feeding a pet; ability to express through various art media one's picture of the most common pets; ability to apply intelligently kindness and tolerance in everyday experiences with pets; ability to listen courteously to the experiences of others; ability to write short sentences about pets within one's own experiences; ability to enter into dramatics with an attitude of happy participation, playing the part in a story, song, or rhythmic activity; ability to work harmoniously in one's social group; and the ability to participate in simple construction of pet houses and cages.

Activities

Excur-sion activities. -- During the pet observations the first-grade class made three excursions: one to a pet store, an excursion to a farm to observe interesting pets, and a visit to a little boy's home to see his rabbit family and examine the pen.

Discussion activities. -- There were any number of plans which had to be discussed before, during, and after the experiences connected with the class activities: planning of means of travel on excursions; discussion of courtesies and respect for hosts; safety on excursions; what to look for on excursions; learnings after excursions;
planning and formulating ideas for construction work; and discussions of famous paintings of pets.

Research activities. -- The class tried to find out about: kinds of pets in the neighborhood; unusual pets heard of; how to care for particular types of pets; the natural food and shelter of pets; and available materials for the construction of homes for pets.

Reporting activities. -- There were quite a number of investigations to be made and reported on before some of the class plans could be executed: committee reports on possible excursions; individual reports on home pets; reports on the care and food of pets; reports of observations from excursions; and committee reports on arrangements for excursions, as to time, place, and transportation.

Looking and listening activities. -- The class played phonograph records about pets, listened to recorded stories about them, and looked at famous paintings of pets.

Creative activities. -- The group originated and produced crayon pictures of pets, paper cut-outs of pets, a frieze of a pet parade, paper foldings of pet homes, cardboard cut-outs of animals, wrote stories about pets, and prepared a pet circus with clay animals.

Construction activities. -- The most outstanding constructions were pet houses made of wood or cardboard boxes, cardboard animals cut out and colored or covered with cloth,
cages and booths for pet show, a pet shop with cardboard animals, and clay models of animals.

Procedure

After Christmas following the study on toys a unit on pets began when a little girl brought one of her four white rabbits to school. The children were very much excited over the rabbit and the timidity of the child who brought the rabbit was at an end, for she told the class all about her rabbits -- the home they lived in, the food they ate, and how they went hop, hop, hop when out in the yard. The children entered enthusiastically into conversation about their pets at home. Each child told what animals he had for pets and what their names were.

The first thing the next morning the children went to the box to see about the rabbit, which had spent the night in the schoolroom. He was given food which the children had brought, and fresh water was put in his cup. His house was supplied with clean papers and fresh grass. A list of foods was made out which consisted of carrots, lettuce, and cabbage. The group decided that the corrugated box was not a good house for the rabbit, so it was suggested that the class made a pen with a wooden floor and a frame over which large mesh wire should be stretched.

A rabbit picture by the board reading space was soon
discovered, and the boys and girls immediately began a story about Fluff, which happened to be the name they chose for the white rabbit. Chalk pictures on dark paper were made and used to illustrate the story.

Soon after the pet rabbit made his appearance at school other children brought pets. The class had a canary bird, a dog, a kitten, a turtle, three goldfish, some baby chickens, and many tadpoles, all of which became visitors and friends of the group of children. Two children had pet ponies on the farm, so they told the class all about them and when the excursion was made to the farm the children saw one of the ponies and enjoyed riding him.

Each pet held the center of the stage individually for a time, when he was pictured in crayon, paint, or colored chalk. Stories dictated by the children followed and each story was printed on a large sheet of tag board and illustrated with one of the pictures. Experiences with the pets and their habits were reviewed and later served as reading material.

Songs were learned, appropriate to each pet, and dramatization was a lively part of the activity.

An excursion to the home of one of the first-grade boys gave the children learnings concerning a rabbit family. Each child had the opportunity to hold a baby rabbit in his hands and to feed the mother and father rabbits. On their return
to the schoolroom, the children immediately wrote the story of their trip. Later the rabbit family was painted in white chalk on dark paper and was used to illustrate the chart.

The canary bird followed the rabbit, and his singing added much interest to the music program. It became necessary to find out about his habits and his food. It was also discovered that even a bird likes and needs a balanced diet.

The dog and the cat only paid the children visits, but many of the children had these animals for pets and thus could tell at once why they made good pets, the type of food each likes, and the kind of house he should have, besides of what value he is to us.

The turtle, the goldfish, and the tadpoles were brought by the children and cared for by them. They learned that the turtle could live out of or in the water, but that the goldfish and the tadpoles must stay in the water. They discovered that the tadpoles would consume each other when no other food was available.

The baby chickens were favorites with a great many children. They liked to pick them up and feel the soft fluffy down. How excited they were when they found that baby chicks like oatmeal just like boys and girls eat!

The pet pony was the center of attraction when the
class visited the farm, and most of the children wanted to
ride him as well as feed him. Besides hay, oats, and corn,
they were delighted when they found that he liked apples
and sugar also. While the boys and girls were at the farm,
they saw a dog, three cats, many chickens, some pigs, and
ducks, as well as cows. It was decided that pigs and cows
would not be good pets, especially in town.

Reading material was very much enriched by having the
pets in the room. Other than writing original stories about
the pets, there were many attractive and appropriate library
books which the children discovered immediately. The books
about "Jo-boy" and "Our Pets" were found to be extremely in-
teresting, and many other pet stories from various sources
were read, dramatized, and illustrated.

The children made cut-out goldfish bowls and fish,
which they arranged each in his own way. They also con-
structed a cat house and a dog house. Toy pets were made
from cardboard and clay for the pet show exhibit.

When the interest was at a high point the class made
an excursion to the pet store where first-hand informa-
tion and observation brought forth much comparative con-
versation as to the likenesses and differences of the pets
with which the children had had experiences and those found
in the store. Comparisons of cages, pens, etc., were made
and questions about the pets' food were asked.
As a culminating activity, the class invited the mothers to come in and see the pet show. The day they came to the Parent-Teachers Association was set aside as the time for their visit to the room. The highlight of the program was several choral numbers put on by the children about their favorite pets.
CHAPTER IV

CASE STUDIES OF INDIVIDUAL CHILDREN

It is important for the teacher to have a knowledge of the social background of each child in her room in order that she may do more effective teaching. The child’s parents, his brothers and sisters, and the financial status of the home are factors of importance. The physical condition of the child, his emotional life, and his interests should all be familiar to the teacher. These data compiling should begin the first day of school and continue throughout the school year with a complete record having been made by the end of the term. In the case studies that follow, the mental age, the chronological age, the intelligence quotient, and the grade placement of each child are included. These data were taken from the California Test of Mental Maturity, which was given to the first-grade children of the Vandiver School, Temple, Texas, on February 23, 1943.

J. B. was a boy whose intelligence quotient was 108; his chronological age, seven years and one month; his mental age, seven years and eight months; and his grade placement, 2.3. He was a frail, sensitive, and timid child, but J. B.
always did some real thinking to help solve the problem at hand. He had an older brother who was thirteen years of age. His father was an army officer, which accounted for the fact that J. B. had had a great many interesting experiences. His artistic ability was outstanding and the children often selected his pictures to illustrate the reading charts. J. B. aided in the problem by bringing a wild rabbit to school, but he found that wild rabbits do not like to live in pens as pets, so he let it run away.

J. E. was a boy whose intelligence quotient was 128; his chronological age, seven years and three months; his mental age, nine years and three months; and his grade placement, 3.8. J. E. had an eight-year-old brother and a mother who were nervous and rather peculiar and these traits were reflected in the younger boy. However, J. E. did exceptional art work, used very good English, and had a happy disposition. He took a great deal of interest in the pets and enjoyed drawing birds and rabbits especially.

D. G. was a boy with an intelligence quotient of 103. His chronological age was seven years and three months; his mental age, seven years and six months; and his grade placement, 2.1. He had a four-year-old brother. His home environment was fair. His father worked as an apprentice in a funeral home. D. G. was a healthy child with a great deal of energy which had to be guided. He was interested
in school and liked to write about the pets and illustrate his stories.

J. S. was a girl with an intelligence quotient of 109. Her chronological age was six years and eight months; her mental age was seven years and three months; and her grade placement was 1.9. There were five children in this family, one older and three younger than J. S. They lived in the country but the father drove a taxi in town. Her living conditions were below normal. She talked baby talk and was over-conscious of her left-handedness. However, she solved most of her speech problems and overcame most of her timidity. Since J. S. lived on a farm, she told us about her baby chicks; then we wrote a story for the bulletin board and drew pictures to illustrate the story.

J. L. S. was a boy whose intelligence quotient was 116; his chronological age was six years and eight months; his mental age was seven years and nine months; and his grade placement was 2.4. He had a little brother who was four years of age. The father and mother were very young and gave the children little guidance. The father sold insurance and made a good living for his family. J. L. S. was a nervous, thin child and was not ready to read until late in the year. The quality of work done on the problem by J. L. S. was only fair, since he did not like to stay with a job until it was finished.
M. C. (1) was a girl whose intelligence quotient was 105; her chronological age was seven years and four months; her mental age was seven years and eight months; and her grade placement was 2.3. She has three older brothers and sisters and one younger. However, she was a very dependent child and indifferent about everything. In all probability her attitude was due to the fact that she was about ten pounds overweight because of a glandular condition. She contributed only a small part to the pet activity, since she was present less than half of the time.

R. J. was a boy whose intelligence quotient was 134. His chronological age was six years and ten months; his mental age was nine years and two months; and his grade placement was 3.8. R. J. was an only child. His father passed away when the child was five years of age. A year later his mother married again, a fact which accounted for some of his maladjustment. He was frail and allergic to many foods. He had attended three different schools. R. J. had acquired a wealth of general knowledge, but he had few specific interests. His ability to contribute to school problems improved and he enjoyed the pet activity a great deal.

E. B. was a girl whose intelligence quotient was 105. Her chronological age was seven years and one month; her mental age, seven years and six months; and her grade
placement, 2.1. She had four brothers and sisters who were older and two who were younger. E. B. was the third member of her family the writer had taught, and she did better work by far than either of the other two. The child's mother was extremely nervous, but E. B. reflected this condition less perceptibly than did the older children. Her English was very poor, but it improved a great deal. E. B. enjoyed the work with pets, especially the art and music.

B. B. was a girl whose intelligence quotient was 112. Her chronological age was six years and ten months; her mental age was seven years and eight months; and her grade placement was 2.3. There were six children in the family, three older and two younger than B. B. The father made a good salary, but since the family was so large, it did not take care of all their needs. B. B. did poor work at the beginning of school, but she improved at a rapid rate. She was a thin child but her general health was good. She had a real interest in art in which she had excellent ability. B. B. showed marked improvement in reading.

E. W. was a girl whose intelligence quotient was 106. Her chronological age was six years and eight months; her mental age was seven years and one month; and her grade placement was 1.8. She was the younger of two girls in the family. Her home environment was good and she had an intelligent mother and father. E. W. had a great many
colds, was nervous and had a habit of squinting her eyes. She sang well but showed little interest in her other work. She had a pet pony and enjoyed helping the group write a story about Beauty.

B. W. was a boy with an intelligence quotient of 123. His chronological age was six years and eight months; his mental age was eight years and two months; and his grade placement was 2.8. B. W. was badly spoiled by his ten-year-old sister and an over-indulgent father. He did poor work in school. He was inattentive and would flit from one thing to another. B. W. had an indifferent attitude and was extremely babyish. He enjoyed the pets at school and took part in the conversation and music, but did little in any of the other activities.

L. N. was a girl whose intelligence quotient was 106. Her chronological age was six years and six months; her mental age was six years and eleven months; and her grade placement was 1.6. She was the baby of six children and noticeably spoiled. She had been in the rural school in which the teacher had given her a great deal of attention. L. N. had been reading with the first and second grades but showed little interest in other activities. She was a disturbing element in most all other phases of work or play. She had some baby chicks at home, so she took part in the conversation, art work, and story telling about them.
B. R. was a boy whose intelligence quotient was ninety-nine. His chronological age was seven years and one month; his mental age was six years and one month; and his grade placement was 0.8. B. R. and his little sister lived with an over-ambitious maternal grandmother. His mother died when he was five years old. B. R. was nervous, he was left-handed, and he had trouble with any kind of hand work; but he read exceptionally well. He enjoyed selecting and reading stories about pets.

M. J. M. was a girl whose intelligence quotient was ninety-eight. Her chronological age was six years and nine months; her mental age was six years and seven months; and her grade placement was 1.3. M. J. M. was the middle child of five brothers and sisters. Her parents had little education and her father was a day laborer. Her experiences had been so limited that she was shy and slow in all that she did. M. J. M. had asthma and colds most of the time, which made it impossible for her to attend school regularly. Considering her handicap, she did good work and was interested in all activities.

B. K. was a boy whose intelligence quotient was ninety-nine. His chronological age was six years and eight months; his mental age was six years and seven months; and his grade placement was 1.3. B. K. was an only child with an over-ambitious mother. His father made a great deal of money,
and therefore the child thought he could and should buy everything he wanted. He was strong, sturdy, and very active. He showed little interest in reading until late in the year, when work on the pet activity began and he brought his beautiful dog to school.

K. J. was a boy whose intelligence quotient was ninety-two. His chronological age was seven years and three months; his mental age was six years and eight months; and his grade placement was 1.4. K. J. had a half brother who was married and in the army. His father was a private and a cook at Camp Hood. K. J. entered school two months late; besides, he had a speech defect and used very bad English. His teeth needed attention, but his mother was slow to have corrections made. Considering the time K. J. had been in school, he showed greater improvement than any other child in the group. His past experiences had also been limited, and his home environment was poor. He enjoyed the little wild rabbit a great deal and contributed to the story about him.

S. G. was a girl whose intelligence quotient was fifty-two. Her chronological age was eight years and three months; her mental age, four years and three months; and her grade placement was 0. The low scores made by this child were due to the fact that she was Mexican. When she started to school, she knew only a few words of English.
She was shy, nervous, and cried several times. As she learned English she became very friendly and said she liked school. S. G. was spoiled even though she had three brothers and sisters. Her father made a living wage and her diet was superior to that of most Mexican children. She especially liked to draw pictures of pets.

J. G. was a boy with an intelligence quotient of 119. His chronological age was six years and eight months; his mental age, seven years and eleven months; and his grade placement, 2.6. J. G. had a baby brother. His father was a physician, and his mother was a very intelligent person. The physical makeup of his home was exceptional, and he was alert and interested in school at all times. He had a great many colds and was out of school frequently, but that fact did not seem to lower the quality of his work or lessen his interest. His best friend had a pony, so that was his favorite pet.

C. H. was a girl whose intelligence quotient was 114. Her chronological age was six years and seven months; her mental age was seven years and five months; and her grade placement was 2.1. Her only sister was timid, shy, and dependent on others, while C. H. had a great deal of initiative, pushed ahead, and was very independent. She was thin due to the fact that she used a great deal of energy in her activities; but she seemed to be strong. Her interest in learning
was keen and she took advantage of all new experiences. Her father was a physician in the army and her mother was a college graduate. Dogs were her favorite pets, and she brought her dog Buffer to school.

M. C. (2) was a girl whose intelligence quotient was 120. Her chronological age was six years and ten months; her mental age, eight years and two months; and her grade placement, 2.8. M. C. (2) was an adopted only child who lived with her maternal grandmother a great deal of the time. M. C. (2) was nervous, colorless, and often sick, which caused her to be absent from school about half the time. She did splendid work when she was there, and was always interested in the activity at hand. M. C. (2) read many pet stories to the class.

E. S. was a girl with an intelligence quotient of 115, and with a chronological age of six years and eleven months, a mental age of seven years and eleven months, and a grade placement of 2.6. E. S. was an only child. Her home environment was good. Her father and mother were young and well educated. The child's experiences had been wide and varied, and she had the ability to do well everything she undertook. E. S. sang well and had a special interest in art. The class wrote a story about her dog Freckles which the children enjoyed very much.
K. K. was a girl whose intelligence quotient was 112. Her chronological age was six years and nine months; her mental age was seven years and six months; and her grade placement was 2.2. K. K. was two years younger than her only brother. Her home environment was above the average, with an intelligent father and a musical mother. K. K. had learned to sing well and did it beautifully. She was alert and entered into every activity enthusiastically. K. K. had a very pleasing personality and a nice attitude. She was always ready to sing songs about the pets, as well as play the stories.

The California Test of Mental Maturity was used to secure case data. The test is important in that it visualizes the significant elements of pupil responses, and the teacher may readily note strength and weakness of the pupil responses in the various situations which together provide a measure of mental capacity and grade placement.

Table 1 reveals the intelligence quotient, the chronological age, the mental age, and the grade placement of each of the twenty-two children in the first grade of the Vandiver School, Temple, Texas. This test was given as a partial evaluation of the activity on "Observing Our Pets" which had been directed by the writer immediately preceding the administration of the test. The experiment was carried on during the school year 1942-1943.
TABLE 1


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<th>Child</th>
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CHAPTER V

CONCLUSIONS

After making a thorough investigation of integration as to its meaning and its ability to help produce the goals set up by society and the writer with a first-grade group of children, the writer developed a plan for testing out this theory. An activity on "Observing Our Pets" was carried on in the room. The children brought a number of pets to school and observed, cared for, and fed them daily. The California Test of Mental Maturity was used and individual case studies were made at the conclusion of the activity on pets, which began immediately after the Christmas holidays and ended on February 23, 1943. It was concluded that the utilization of integrated teaching developed the children's capacity of self-expression and at the same time developed wholesome relationships within the group. It was also concluded that if teachers utilize the plan of integrated teaching as conceived by the writer, critical thinking will be encouraged, intelligent interaction and continuous adjustment will be made, and individual aptitudes will be developed. The grade placement of any normal group at this time of year would be 1.7. Sixteen children out of twenty-two
placed above the level, which proved that they not only showed personality development and ability to adjust to environmental conditions, but also gave proof of academic progress.
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