A CURRICULUM MODEL FOR AN OPEN SPACE RURAL KINDERGARTEN

by

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DEDICATED TO MY FAMILY

Stephen Lynn
my husband...

David Petersen
my son...

Tiffany Leigh
my daughter...

_____ _____
my expectant child...

Juanita Collins Latiff
my mother...

Maggie Arizona Collins
my grand-mother...

Helen Marie Latiff
my sister...

Samuel H. Latiff
my father.

ACKNOWLEDGMENTS

Once upon a time... I think that's how a story begins, for that is how my story began. I had an idea that the best of two worlds could be made into one, and as I set out to explore my idea, I came in contact with many wonderful people who shared with me their encouragement, their ideas, and their support to make my idea a reality. I cannot list all the names for they are legion in number, but I do want to mention the personnel of the Shawsville and Riner Elementary Schools of Montgomery County for their help in this study.

But there are individuals whom I want to mention by name.

Dr. Rose Sabaroff, is as her name implies, a Rose, and every year that I have known her she has given me her confidence and like the fragrance of a Rose--it has always been with me.

Dr. Robert Frary, my "Socrates." His patience and understanding was never ending, and his friendship a major influence in the completion of my degree.

I would also like to recognize Dr. Wayne Worner, Dr. Richard Salmon, and Dr. Shirley Farrier for their confidence, understanding, and help in completing the magic circle of five.

In this story there were three little elves who each played an integral part at different times in my story. There was first Joan, then Marty, and last Sue. Each had a hand in completing the story. To them I give a smile and a "we did it" hug.

In every story there is a family and mine is no exception. My wonderful husband, Steve, is writing his own story as I have

worked on mine. His love and his shoulder have been my constant companions from the beginning to the end of this story.

When my story began, I had only one child, a fine son David, who has been so understanding with his Mother, and who has shown his love for her in every way. Some day he will understand how much I appreciate his love and understanding.

As time moved along, another child came into the family, "Tiffany Leigh from Tennessee." The joy she has added to this story could only be sung by the angels.

Another child is on its way and this child has had a part of the final writing of the story. When I let my mind go astray, it would always give me a "kick" to get me back on my way.

My Mother, the angel of this story, has watched over me and given me the encouragement to complete the project with her phase "just get up there and do it."

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Gary Joe Burchett, Vice President of Lincoln Memorial, has never failed to support my efforts to accomplish whatever I believe in nor has his faith in me diminished.

The story quickly came to an end with the skills and knowledge of DeAnne Lineberry, editor, perfecting the final form of the manuscript - to her a special thanks.

At the end of the story I say - God bless all of you who helped me take an idea and make it into a reality.

And to all of us - may we live happily ever after.

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CHAPTER I

INTRODUCTION

The Virginia State Board of Education adopted Standards of Quality and Objectives for Public Schools in Virginia on June 23, 1972 (1972-74). The following policy statement concerning an acceptable date for inaugurating kindergartens in Virginia was part of the Standards:

> In view of the importance of providing kindergarten education throughout the State, school divisions should begin planning promptly for the inauguration of this program by September, 1974. In exceptional circumstances and for justifiable reasons, the Board of Education may consider September, 1976, as the latest "acceptable date" for the inauguration of kindergarten education.

In response to these standards, the Montgomery County School System opened two kindergarten classrooms in the fall of 1972. The kindergartens were to be used as models for other kindergarten programs to be developed in the county. Shawsville Elementary School and Riner Elementary School were the two new open-space schools that would be the site of the first kindergarten programs.

Upon learning of this plan, the researcher contacted the Superintendent of Montgomery County Schools and asked him if it would be possible to develop a model kindergarten program in one of these schools. The Superintendent agreed and allowed the researcher to develop her program in the Shawsville kindergarten. Meanwhile, the Riner kindergarten would use as a model the traditional child-

development oriented kindergarten curriculum. The Shawsville kindergarten, the site of the researcher's activity, was to utilize the open-space concept for which the building had been designed. The only other guidelines given to both kindergartens were those stated as "broad objectives" in the State's A Guide for Kindergarten Education. The Shawsville kindergarten would be observed closely and might be considered as a model for the Montgomery County kindergartens to be opened the following year.

Statement of the Problem

The purpose of this study was to develop and implement at Shawsville Elementary School a kindergarten program based on the best current knowledge of child development and one that exposed children to types of activities and organizational patterns commonly used in an open classroom first grade. The kindergarten models that were considered for this model were:

1. Open-education Model.
2. Child-development Model.
3. Verbal-cognitive Model.
4. Sensory-cognitive Model.
5. Verbal-didactic Model.

The curriculum to be developed would utilize these ideas and adapt them to open classroom and center activities, both free-choice and prescribed. Academic readiness activities would be selected to best prepare the children for transition into an open classroom

first grade. The model to be developed would be entitled the Oh We Learn (OWL) kindergarten curriculum model.

The implementation would be documented to permit a comparative evaluation of this program and the one at Riner. Student progress was evaluated for both the Shawsville and Riner kindergartens in the following areas:

1. Verbal skills as measured by the subtests: word meaning, listening, alphabet of the Metropolitan Readiness Tests (MRT, Hildreth, et al, 1969).

2. Performance skills as measured by the subtests: matching, numbers, and copying of the MRT.

3. The Slosson Intelligence Test for Children and Adults (SIT, Slosson, 1971).

4. The Boehm Test for Basic Concepts (BTBC, Boehm, 1971).

Progress in the verbal and performance areas was analyzed according to the following demographic variables: sex, age, absences, parental participation, father's education, mother's education, socio economic status, home environment, child's sociability, and number of brothers and sisters. Data gathered at Shawsville also included scores from Form F of the Metropolitan Achievement Tests (MAT, Durost, 1971) for word knowledge, word analysis, total reading, and mathematics.

Definition of Terms

The following definitions are provided for terms used in this study:

1. Traditional Kindergarten - A school program designed for five-year-old children and best characterized by its concern for the general social-emotional development of the child.

2. OWL Kindergarten Curriculum Model - The name given to the kindergarten program implemented at Shawsville Elementary School. The letters "OWL" abbreviate the phrase "Oh We Learn." The title implies that the children are responsible for decision making in many of the kindergarten classroom activities. The Wise Owl represented learning. This program utilizes free-choice centers and prescriptive centers. It is also designed to facilitate transition to an open-classroom first grade.

3. Free-choice Centers - Centers where a child may choose what type of learning activity will take place.

4. Prescriptive Centers - Centers where a child is directed to go with his individual group and where the academic content to be learned is structured by the teacher.

5. Parent Participation - If parents volunteered their time, services, or money to the kindergarten, they were considered to be participating in the activities of the kindergarten.

6. Socio Economic Status (SES) - Students were assigned to low, middle, and upper income levels according to the following criteria:
   Low: those children who were receiving free lunches,
   Middle: those children whose parents held semi-skilled or unskilled occupations,
   Upper: children of business or professional parents.

7. Father's Education - The number of years completed in school.

8. Mother's Education - The number of years completed in school.

9. Home Environment - Children were assigned to poor, average, and above average home environments according to the following criteria:
Poor: house poorly furnished, no educational materials available,
Average: adequately furnished; books, TV, toys present,
Above average: play rooms, studies, many materials available to serve as basis for learning. Analysis of a student's home environment was made by the teacher's home visit.

10. Child's Sociability - A child was categorized as shy, average, or dominating in the classroom by judgement of the teacher:
Shy: played by himself, was quiet,
Average: took part in group activity, talked in class, had friends he regularly played with,
Dominating: demanded that he be the leader all the time, bullied the children into playing with him, monopolized conversation.

Population

This study was limited to the kindergarten class of the Shawsville Elementary School, Shawsville, Virginia, in the 1972-73 school year. Thirty-five children were involved in the Shawsville kindergarten program.

The Riner kindergarten at the Riner Elementary School, Riner, Virginia, was used to compare data. Forty children were involved in the Riner kindergarten program.

Summary and Overview

Chapter 1 contains an introduction to the problem, a statement of the problem, definition of terms, and a description of the population included in this study. Chapter 2 reviews the literature related to the study. Chapter 3 describes the procedures and the

OWL model: its philosophy, the role of the teacher, objectives of the model, classroom procedures to achieve the stated objectives, and the role of the parent volunteer. The goals and schedule of the Riner kindergarten are also described for comparison. Data collection and statistical procedures are also presented in Chapter 3. Chapter 4 contains the results, and Chapter 5 presents the summary, conclusions, replications, and suggestions for further research.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This review of the literature and related theory deals with the general background and nature of kindergarten curriculum models upon which the current study draws. Also, influences of these curricula on the OWL model are specified.

Open Education Curriculum Models

The basic organizational design of the OWL model was patterned after an "open education" curriculum since the children in this kindergarten would be continuing in an open space curriculum. The work of Froebel, Montessori, Dewey, Isaacs, and Piaget, starting at the beginning of this century, laid the foundation for the growth of present open education concepts (Blitz, 1973).

Froebel had demonstrated that play was the learning vehicle for the young child, and by the early 1900's the recognition that young children learn through play had become respectable. Froebel's child-centered orientation has persisted among his successors, and provides, at least in theory, the backbone of modern nursery school and kindergarten practices. It was not, however, until several years after Froebel's death that the concept of making kindergarten a part of the standard public school experience was formalized (Evans, 1975).

As the thinking of John Dewey gathered support around the turn of this century, philosophical and pedagogical controversy over the purpose and content of kindergarten programs became apparent (Evans, 1975). Dewey saw the school as primarily a social institution which represented life as vital to the child as that carried on in the home. As such, it was not a preparation for future living but an experience in socialization which would provide the basis for future living of a better quality (Frost and Kissenger, 1976). He felt that the school's experiences should be first hand, with real life situations, stemming from a child's natural interest (Dewey, 1938). Dewey's extensive writings initiated the progressive movement in elementary education in this country which was briefly successful but disappeared after much abuse by practitioners and laymen (Cremin, 1967).

Despite the demise of the progressive movement, Dewey's theory that children learn best by doing real things and involving themselves in real situations has had lasting effects on classrooms throughout the country. The open-space classroom concept draws heavily on his idea that the curriculum should be an entity which simulates the world outside the classroom (Blitz, 1973).

Maria Montessori, a comtemporary of John Dewey, showed many differences in her educational philosophy; yet their ideas are not totally dissimilar. The Montessori approach is based on an attempt to understand the child's own natural developmental process and

leads to the exploration of didactic materials sequenced according to the child's increasing natural capacities, interests, and competencies. The adult guides the child to work with materials appropriate to his development in a particular area, maintains order in the physical environment, and helps the child develop a social order (Frost and Kissenger, 1976).

Montessori emphasized process rather than content and felt that educating the senses according to the natural physiological and psychological development of the child was paramount. She also emphasized using materials appropriate for children and having a physical environment geared to the child's convenience rather than the adult's. She believed this to be a concrete way to show children that adults loved and respected them as individuals. She further believed that as a child learned order, learned to maintain a schedule, and learned to respect the work and rights of others, he was better prepared for life (Frost and Kissenger, 1976). Her theories alerted educators to the importance of materials and surroundings in structuring the learning of young children. Montessori's ideas also raised questions about the long held assumptions that young children had brief concentration spans and that their interest in learning was transistory.

Jean Piaget began to study and identify the educational needs and abilities of children at different developmental stages in the 1900's. Although Piagetian theory is still being formulated

and even Piaget himself is mystified over the widespread enthusiasm of educators for his point of view, he does give teachers some specific advice:

1. Provide children with actual objects to manipulate.
2. Assist children in their development of question-asking skills.
3. Know why particular operations are difficult for children (Evans, 1975).

Piaget, as quoted in Ripple and Rockastle (1964) states:

> The goal in education is not to increase the amount of knowledge, but to create the possibilities for a child to invent and discover. When we teach too fast, we keep the child from inventing and discovering himself. Teaching means creating situations where structures can be discovered; it does not mean transmitting structures which may be assimilated at nothing other than a verbal level.

Basic Piagetian Development Theory includes the following implications:

1. That intelligence grows from the individual's ability to incorporate new learning or experiences into his existing cognitive structures, which change to accommodate new learnings.
2. That intelligence is cultivated only from experiences that require the individual to go beyond simple perceptual decisions.
3. That feedback enables the individual to correct mistakes, a process which enhances intellectual growth and cultivation (Clark, 1973).

According to Jean Piaget's genetic approach to intellectual development, an individual continually strives toward progressively

higher levels of cognitive integration, a process marked by confrontation with, and adaptation to, physical and social reality. This adaptation is said to be both sequential and invariant. According to Piaget's description, kindergarten enrollment coincides with the child's second state of development. During this period, the child's thought is said to be dominated by his absolute perceptions; the unique cognitive achievement of this stage is mastery of symbolic or representational thought (Evans, 1975).

Since Piagetian theory has many unresolved issues to serve as a blueprint for curriculum development, it can only provide clues for educational objectives and procedures. Some of the main adaptors of Piagetian theory to early childhood education are Wiekart et al. (1967), and Kamii and Radin (1967). Although they interpret the same theory into curricula, they generally do not agree with each other. Some of the points of agreement in all three interpretations are:

1. Active involvement in learning is necessary for children.
2. Play and unstructured learning experiences are invaluable for developing ability to think in logical and causal terms.
3. Teaching children by telling is inefficient and vain.
4. Mental activity is critical in observing, interpreting, and reconciling environmental phenomena.

5. Accepting children's wrong answers and prompting them to correct themselves is quite important.

6. The role of the teacher is that of initiator-guide as opposed to the tradition director-supervisor.

Historically, the open education concept for young children came to the United States as a result of successful practices of British educators who salvaged Dewey's theories and developed the "Infant School" for children ages five to seven. Although American practices may not be identical, they are heavily based on the practices initiated in the British Infant Schools (Perrone, 1972). Observation in a typical American open education classroom may find some children reading while others play musical instruments, weave, act out a play, work at math, or paint. The mobility of children is obvious. The classroom typically is decentralized into a variety of learning areas and there is no "front of the room." Desks, if there are any, are usually grouped in clusters. Commercial and homemade materials of considerable range and diversity are found in abundance. Children are free to converse, and the noise level is typically higher than that of the traditional classroom. The classroom atmosphere is relaxed; there is a sense of fun in learning, and the teacher may not be immediately visible.

Adults and older children are looked upon as resources, and teachers generally perceive others in the classroom as additional individuals with whom children can interact. Parents

frequently participate in classroom activities. In these classrooms where goals are less dominated by precise curriculum objectives, specialized training for parents is less important. As a result, parents are often found in open classrooms taking part in such activities as wood working, cooking, sewing, arts and crafts, reading stories, listening to children read, sharing work experiences and personal interests, and simply conversing with children (Perrone, 1972).

The OWL model is patterned in many ways after Dewey's theory that children learn best by doing real things and involving themselves in real situations. In many of the centers, real life situations, such as making cookies or learning to sew, were experienced by the children, and many of these experiences came from the child's own interest. Parents helped the children with materials and helped to maintain order in the physical environment. Parents under the teacher's guidance also helped direct some outside coordination activities.

One of the important rules of the OWL classroom was that of respecting the work and the rights of other children. This major principle was also taken from Montessori who believed that if a child learned order, maintained a schedule, and respected the work and rights of others, he was better prepared for life.

The Piagetian theory of teaching by creating situations where structures can be discovered was used in establishing

the math and science centers. The OWL model was consistent with the philosophy that it is necessary for children to be actively involved in their learning and that children cannot be taught by telling alone. When a child is learning, he will make mistakes. In the OWL classroom the child's mistakes were accepted and he was prompted to correct himself.

The basic design of the OWL classroom and the organizational pattern was taken from the British Infant School format. By organizing the classroom into centers for learning, the children were placed in situations where they had to make decisions many times during the day. This organization allowed for centers to be used in two ways: either as free-choice centers or as prescriptive centers.

There was always an adult other than the teacher in the classroom. The teacher was there to serve as a resource when needed, but often another adult was also active in the child's learning. The adults who participated in the model kindergarten included volunteer substitute teachers, a great-grandmother, fathers, aunts, and mothers of the children in the class. By having additional adults in the classroom with teachers, many more things could be happening in the classroom simultaneously. Parents worked in art, sewing, cooking, and reading centers. Sometimes a parent would be there just for a sharing time with a child who needed extra attention. As in the British Infant School, parents helped to provide for personal interaction with children.

As in the British Infant School, student's learning was not stressed a great deal in the free choice centers. Instead, this time was available for each child to freely choose his learning activities. But in the prescriptive centers, more stress was placed on learning particular skills necessary for success in first grade.

The Child-Development Model

The child-development model views the child's ability to learn as depending upon his emotional well-being. It incorporates the work of Freud, Erickson and Gessel, who supported the idea that early childhood experiences influenced later life behavior. According to these theories, as each stage of development is completed, a firm basis is established for entering and completing the next stage. If a person is thwarted in the completion of the tasks for a particular stage, his energy becomes fixated at that point and succeeding stages become increasingly difficult to complete.

Erikson's theory of psycho-social development identifies the preschool period as one of "vigorous unfolding." Because of his increased understanding of himself and those around him, the child is ready to concentrate on the tasks of cooperation, self-control, self-esteem, confidence, self-expression, and perceptual-motor coordination (Clark, 1973). The child at this stage is eager and able to cooperate in making things, to

cooperate with other children for the purpose of planning and constructing, to profit willingly from teachers, and to emulate ideal prototypes (Erikson, 1963).

The child-development model evolved during the post-World War II period, and its main goal was to provide an environment in which the young child would meet his developmental needs for playing with other children and for extending his experiences beyond the home (Kamii, 1973). Although this model first served middle class populations, it was later used as the beginning phase of Head Start, the federal government's pre-school program for disadvantaged children. (When it was applied to disadvantaged populations, it has been termed the "enrichment strategy").

The objectives of this model focus primarily on social and emotional development and emphasize such things as:

1. Learning to interact and cooperate with other children.
2. Developing inner controls in accordance with appropriate behaviors.
3. Developing a sense of self-esteem and confidence.
4. Extending abilities for self expression and creativity in language, music and art.
5. Learning about the wider environment (Kamii, 1973).

Interaction in this model is geared toward the child and his learning materials/environment, and recognizes the importance of concrete nonverbal learning experiences in the development of

the whole child during this developmental stage. The overall goal of this interaction with the materials is developing social and emotional maturity. Although teacher intervention is generally discouraged, such intervention is molded by this goal (Clark, 1973).

The curriculum of the child-development model is centered around organized activity areas. These activity areas include:

1. A building area with blocks of different sizes and shapes.
2. A woodworking area with saws and hammers, nails and soft wood.
3. An art area with paints, clay, paper, scissors, crayons and other art materials.
4. A housekeeping area with stove, refrigerator, doll carriages, tables and chairs, tea sets, dress up clothes, etc.
5. A reading area stocked with picture books and story books.

A large area is used for group activities such as music and movement, rest, and story time. A quiet area is supplied with puzzles and games and a science table with an assortment of nature objects. In the outdoor area swings, seesaws, and equipment for sand and water play are provided.

The children are free to choose and change activities according to their particular desires. The teacher's purpose is to get the child the things he cannot get by himself. This model is designed to encourage and facilitate child-child interaction rather than providing activities which require individual

involvement or interaction with an adult. Activities such as socio-dramatic play, block building, and art all offer opportunities for joint child-child participation without a teacher's intervention.

Specific learning and direct instruction are excluded because the preschool child is considered to lack the developmental readiness necessary to profit from such instruction. Rather, young children are believed to learn best by doing. The learning experiences are concrete and are linked closely with the child's personal experiences. Immediate instruction is considered inappropriate and possibly disruptive to the child's total growth pattern (Kohlberg, 1968).

The OWL model utilized the child-development concept for the morning activities in the free-choice centers. In the morning, the OWL model had available many of the types of centers that a child-development model would have, such as the block center, the housekeeping center, and the art center. These centers allowed for the child-child interaction needed by many five year olds.

The OWL model also had an area that was used for large group activities similar to that in the child-development model; however, the OWL classroom used the large group area for transitional or enrichment activities such as music or storytelling, whereas the child-development model used this area for the

primary instruction of the day. The role of the teacher as described in the child-development model was rejected because the teacher in the OWL model wanted to take a more directive role.

The Verbal-Cognitive Model

This model is primarily based on the Perry Preschool Project operated by the Weikart group in Ypsilanti, Michigan, which originated in the early 1960's and which was concerned with the intellectual development of educationally deprived black children (Evans, 1975). Although the basic orientation is similar to Piaget's, the verbal-cognitive model is specifically aimed at and designed for disadvantaged children and it employs only a portion of the total Piagetian concept: the elements of symbolization and elementary relationships. These two concepts were chosen because they could help actualize the transition from sensory-motor intelligence to conceptual intelligence (Clark, 1973).

The main objective for a Piagetian cognitive program are:

1. Development of physical knowledge.
2. Development of social knowledge.
3. Development of logical knowledge in classification, seriation, number, space, and time.
4. Development of representation at the symbolic level (Kamii, 1967).

The main differences between the child-development model and the verbal-cognitive model are the role of the teacher and the focus on cognitive development. In the verbal-cognitive model, the teacher takes a much more directive role and is concerned with the children's cognitive development. The teacher is continuously speaking to the children, questioning them, and responding to them. This teacher verbalization is termed "verbal bombardment" and often takes the form of a steady stream of questions and comments to draw the child's attention to specific aspects of his environment. The complexity of language is increased as the child's verbal ability develops (Weikart, Kamii and Radin, 1967).

The curriculum content is structured to overcome specific cognitive and affective deficits and to prevent further cognitive deficits. The activities and equipment are much the same as those employed in the child-development model. However, the role of the teacher's purpose is:

1. Concentrate on overcoming particular skill deficits or on teaching a pre-academic concept essential to later intellectual growth.
2. To make discoveries inevitable.
3. To arrange the environment so that appropriate learning will occur (Sonquist and Kamii, 1960).

The interaction emphasized in this model focuses basically on child-material interaction. The teacher attempts to get the

child to process and apply information, to obtain information from available cues, and to perform if-then deductions and abstractions. As the child progresses, more complex and difficult tasks are presented in the teaching areas (Clark, 1973).

The OWL model took the more directive role of the teacher from the verbal-cognitive model. Teacher mediation was incorporated into the design of activities. The teacher in the OWL kindergarten as in the verbal-cognitive model planned specific activities for the children which required verbal interaction with the teacher.

The OWL model rejected the "verbal bombardment" technique, but the children were encouraged to verbalize. The teacher insisted upon the child asking or telling the teacher what he wanted with a distinct and clear voice. No child was allowed to mumble or use sign language to get what he wanted. The children were encouraged to speak to the group by telling stories, singing songs, and sharing experiences. The microphone was used for this activity, allowing the child to hear his voice both loud and soft. The teacher always referred to objects by their name, and many times a game was made of naming objects. No child was refused if he asked to talk, although sometimes a child who abused this privilege would be taken aside to discuss this problem. The teacher would take time to explain to the child that others wanted a turn to talk. Talking and verbalizing played a very important part in the OWL model and was considered one of the assets of the program.

The Sensory-Cognitive Model

Maria Montessori is the prime philosopher behind this model. The sensory-cognitive model assumes that intelligence has sensory-motor roots and that children learn from a sensory interaction with their environment. Since intelligence is viewed as the ability to order and classify, children in this model are urged to become so sensitive to the specific attributes of things around them and so expert in classifying them that everything would hold some significance and value. This model also tries to stimulate intrinsic motivation through activities that are challenging and self teaching (Kohlberg, 1968).

The sensory-cognitive model aims to develop the child's sensory discrimination and motor abilities. The objectives of this model emphasize the development of the following abilities:

1. To match and discriminate shades of color, sound, textures, weights.
2. To order objects along a dimension of increasing size and/or pitch.
3. To differentiate an order of increasing weight from one of increasing diameter.
4. To care for plants and animals.
5. To care for one's own washing and dressing.
6. To count.
7. To develop motor skills for writing.
8. To learn the sounds of letters.
9. To pay attention (Montessori, 1914).

Independent endeavor is encouraged. The senses are educated by utilizing exercises and equipment deliberately structured to make the children sensorially more acute (Clark, 1973).

The classroom of the sensory-cognitive model is arranged in an orderly and uncluttered manner, designed to preserve the freedom of the individual child while introducing him into a highly structured learning environment. Although there are small chairs and low tables in the room, much of the floor space is free of furniture. Each child has his own small rug to roll out on the floor and many of the children's activities consist of working alone with various materials on their individual rugs (Montessori, 1914).

Although there is no detailed schedule of events for any particular child, there is a general pattern of events that gives the child a sense of knowing what to expect. Games, activities, and exercises have their own order and are designed to develop sensory skills, to allow children to carry out practical life activities, and to teach writing and arithmetic.

The classroom atmosphere is one of quiet activity where children work individually with materials designed to take them, step by step, through the elements of a task to be mastered (Clark, 1973). Only occasionally does the teacher join the student to demonstrate the use of a particular material. Although

the teacher demonstrates the activities with few or no words at all, the actions are very precise. Montessori's de-emphasis on language instruction stemmed from her belief that the pre-school years were not among the most sensitive periods for language development.

Other contributors to the sensory-cognitive model include Omar K. Moore with his "talking typewriter," a tool on which young children learn to read and write at their own pace (Anderson, 1971); Dr. Glen Nimnick and his "New Nursery School" songs and stories on records and a talking typewriter booth; and Lauren B. Resnick who tests each child to determine his level of ability and skill (Hess, 1972). None of these newcomers has significantly changed the sensory-cognitive model, but each has added a dimension of technology and testing to the original concept.

The OWL classroom was very different from the classroom of a sensory-cognitive model. The OWL classroom had many separate centers, lots of pictures on the wall, and things hanging from the ceiling. Space was utilized not only on the floor but also the ceiling; thus, a child could look up and see on the ceiling what object was in the corresponding space on the floor. One of the first problems encountered by the OWL teachers was that of the children's not knowing where to go in order to find a center they wanted to play in. This was solved when the space directly above the center had objects hanging from the ceiling which suggested what was

in the area below. For example, blocks hung over the block area, a large paper house over the housekeeping area, alphabet letters over the language center, big and small scissors over the perception center, and paint brushes over the art center. This solution was very successful in helping the children find the center they wanted.

As in the Montessori model, the children in the OWL model took care of their own classroom. They washed the tables and the chalkboards, picked up paper from the floor, returned materials to their proper places, went to the kitchen to get the milk for the milk break, and performed many other similar tasks. The children knew they played an integral role in the kindergarten and that the care of their classroom was their responsibility.

The children also learned to wash their hands, to put on their coats, to fold the mats they used for napping, and to take care of their personal needs. In the OWL classroom there were pets for which children were responsible. They had a rabbit and guppies, and different children were assigned to take care of them. Should these children fail to fulfill their responsibility, other children in the kindergarten would quickly remind them of their duties and see that the pets were fed.

Although the OWL classroom did not contain children of differing ages, there were children of differing abilities.

Children from the fourth and fifth grades came to the classroom each morning to work with the kindergarten children. Sometimes the older children would simply come and play with the kindergarten children in the housekeeping area or block area. This provided an interaction with older children that many of the kindergarten children had not had before.

The Verbal-Didactic Model

The verbal-didactic model is based on Bereiter and Englemann's (1966) academically oriented preschool model. Unlike the other curriculum models under consideration, this program was designed exclusively for disadvantaged children. Its purpose is to equip them with information and skills needed for success in first grade. The curriculum consists of direct instruction in language, arithmetic, and reading, and allows time for periods of music and semi-structured play. During play periods, children may choose to listen to a story, look at a book, work on a puzzle, or draw. For the music period the group meets as a whole, and songs are chosen and words changed to reinforce the rules taught in the academic curriculum.

Each teacher in the program takes responsibility for one subject area. The children are grouped on the basis of ability into three smaller units that rotate among the subject areas and teachers. The reading curriculum is based on a phonic approach.

(Bereiter and Engelmann, 1966). The mode of instruction in language, as well as arithmetic, is intense oral drill. Concepts are taught as rules which are to be learned by rote and then applied to analogous examples.

The goal of this model is to increase the child's learning of specific information and rules in the areas of language, arithmetic, and reading. Objectives include:

1. Ability to use statements in reply to the question, "What is this?"
2. Ability to handle polar sets (big-little).
3. Ability to perform simple if-then deductions.
4. Ability to name the basic colors.
5. Ability to count objects correctly up to ten.
6. Ability to recognize and name all the vowels and at least fifteen consonants.
7. Ability to sight read a vocabulary of at least four words (Bereiter and Engelmann, 1966).

The mode of teacher instruction is highly verbal and highly sequenced. Teacher mediation is patterned on behavioristic principles of learning theory. This theoretical orientation holds that learning--which is defined as changes in behavior--can be most efficiently induced through instruction involving repetition of associations between the teacher's stimulations and the child's responses (Kohlberg, 1968). Rewards or reinforcements follow correct responses so that the new behavior does not become extinguished or forgotten. Accordingly, Bereiter and Engelmann employ extrinsic reinforcers--verbal

and nonverbal--in line with behaviorist learning theory. The motivation to learn is seen as contingent upon events in the environment rather than being viewed primarily as an intrinsic part of human nature.

The emphasis on teacher-child interaction and de-emphasis on child-child and child-material interaction follows from the reliance on direction and instruction and the emphasis on language development. Bereiter and Engelmann note that their objectives represent kinds of learning that do not arise easily and naturally from casual conversations and experiences. They are not the kinds of learning which are likely to accrue from children's playing together with blocks and clay; rather, teacher directed learning is necessary.

Kohlberg (1968) identifies the Bereiter/Engelmann approach with the "culture training" stream of educational thought. This approach assumes that what is most important in the development of the child is his learning the cognitive and moral knowledge and the rules of his culture, and that the business of education is teaching such information and rules to the child through direct instruction.

The OWL model agreed with the Bereiter/Engelmann principle that academic learning does not arise easily and naturally from casual conversations and experiences and that some provision must be made to assume that this type of learning will take place. Therefore, the OWL model included the prescriptive

centers. The activities of these centers were those associated with skills need in the first grade such as reading, writing, math, perception, and language. The OWL model did not use intense oral drill, but instead used discussion, demonstration, active involvement, and other similar teaching techniques. The children were grouped according to ability as in the verbal-didactic model, but each group did not have the same intense lesson every day. The groups in the OWL model were continually regrouped as the teachers prescribed needed activities. Rewards and reinforcements were used when a child gave correct responses or responded in an appropriate manner. These reinforcements were those of physical contact, smiling, etc., and were not limited specifically to the prescriptive centers. A child was involved in many activities during the day, always accompanied by reinforcement. Each group progressed through the prescriptive centers until all centers had been completed by all children. Content varied for different groups in each center except art where the objectives were uniform for the entire kindergarten. In other centers, such as math, language, writing, or perception, various objectives were written for each group and sometimes for individual children.

Summary

The literature reviewed in this chapter covers a wide area and relates to different philosophical bases for developing kindergarten curricula. The following is a summary of those aspects accepted

or rejected from the different models just described and incorporated into the OWL model:

Open-Education Model

Accepted:

1. The basic design of the classroom space.
2. Parent involvement in the classroom.

Rejected:

1. Total unstructured learning.
2. The non-directive role of the teacher.

Child Development Model

Accepted:

1. The part of the day's activities utilizing free-choice centers.
2. The need for child-child interaction.
3. The need for activities to promote the social and emotional development of a five year old.

Rejected:

1. The passive role of the teacher.

Verbal-Cognitive Model

Accepted:

1. More directive role for the teacher in the classroom.
2. Encouragement of verbalization.

Rejected:

1. Verbal bombardment.

Sensory-Cognitive Model

Accepted:

1. Children should be responsible for themselves and their classroom.

2. Older children should interact with kindergarten children in various activities.

Rejected:

1. The sterile classroom environment.

Verbal Didactic Model

Accepted:

1. Structured centers which were called prescriptive centers in the OWL model.

2. Activities in the prescriptive centers which offer readiness skills in language, reading, mathematics, and perception needed for success in first grade.

Rejected:

1. Every child's following the same lesson plan each day.

The present study attempts to accept the best features of each of the curriculum models presented to build a curriculum for a kindergarten having a large proportion of low-income children. Chapter 3 will present the design of the OWL model.

CHAPTER 3

PROCEDURES

The Oh We Learn Kindergarten Curriculum Model

The OWL model was designed to meet the personal and academic needs of the Shawsville kindergarten students of the Montgomery County School System. Important characteristics of the program include philosophy, the role of the teacher, objectives, classroom procedures and the role of the parent volunteer as used in the implementation of the OWL model.

Philosophy

The OWL model was based on the following philosophy:

1. Every child has the right to learn; he learns best in an environment most closely related to real life situations. Situations involving people outside the school help to provide a better learning experience.

2. Every child is an individual with individual needs which must be recognized before they can be met.

3. Every child needs to belong to a group and to participate in the group's decision-making.

4. Every child should have some type of personal contact with the teacher, creating a closeness that stimulates within the child the desire to learn.

5. Every child needs to be loved.

6. Learning is fun and it happens everywhere all day long.

The Role of the Teacher

The role of the teacher in the OWL model included the following functions:

1. A facilitator - The teacher made things easier for the children whenever situations came up that needed her help.

2. A guide - The teacher gave students directions on how to work in the different centers. She also determined the time allotted for the various learning activities.

3. A friend - The teacher was there as a friend to any child who needed someone at a special time or to members of a group who felt left out of things.

4. A mediator - The teacher frequently had to intercede between two individuals or two groups and aid in reconciliation.

5. An educator - The teacher structured the activities of the centers, and in some of the centers she would instruct the students in the content areas.

Objectives of the OWL Model

The objectives designed to meet the philosophy of the OWL model were divided into two categories: those which were measurable and those which were non-measurable. The OWL model attempted to meet all objectives included in both categories, but only the objectives that were measurable were considered in the evaluation of this program.

Measurable Objectives

The OWL model would develop the following measurable skills:

1. Math skills such as:

    a. One to one relationships.

b. Grouping objects in sets of ten.

c. Counting to forty.

d. Defining the basic shapes.

2. Reading readiness skills such as:

a. Identifying the letters of the alphabet.

b. Writing one's own name.

c. Writing on lined paper.

3. Eye-hand coordination such as:

a. Knowing left and right.

b. Knowing up and down.

c. Being able to coordinate eye-hand activity.

4. Listening skills such as:

a. Following directions.

b. Listening attentively to a story.

c. Comprehending a story being read to him.

5. Language skills that the child needs to communicate with his peers and his teachers.

Non-measurable Objectives

The OWL model would develop abilities in the following areas:

1. Creativity.

2. Independence.

3. Respect for the rights of others.

4. Self-worth.

5. Decision making.

6. Ability to work efficiently in different situations:

a. By himself.

b. In a one-to-one relationship with the teacher.

c. In a small group.

d. In a large group.

7. Appreciation of beauty in music and art.

8. The feeling in each child that he is wanted, needed, and loved.

Classroom Procedures of the OWL Model

Due to the different arrival times of the buses, the children entered the kindergarten at different times between 8:00 a.m. and 8:45 a.m. in the morning. Upon entering the kindergarten, a child would hang up his coat and put away his things in his cubby. The cubby was a vegetable bin that stacked easily and was used to store the items a child brought to school, such as pencils, dolls, cars, etc. It was also used to store work that a child had completed during the day and that would be taken home in the afternoon. The cubbies were located in different parts of the room, and each child had his own cubby with his name printed on it.

In the beginning the child was given his name printed in large manuscript on a large piece of colored construction paper. He used this paper to match his name on his cubby and anywhere else his name was to be found in the room. It took about one week for all the children to identify their names and match them to their cubbies.

After placing his things in his cubby, each child would go to the "Home Board" to pick up another name card. This card was a laminated 5"x7" card on which his name was printed with either red or blue ink. The red cards were inside a house made of red string, and the blue cards were inside a house made with blue string. Each child had a house in which his name was kept; thus he lived either in the blue house or in the red house.

After getting his name from the house board, each child selected a center and placed his name in one of the squares on the free-choice center board. A child stayed in the chosen center until he decided to leave, or until it was time to proceed to other activities.

Pictures were used to identify each center. For example, a block was used for the block center, a house for the housekeeping center, a book for the reading center, a television for the television center, scissors for cutting center, a piece of puzzle for the table-toy center, an ear for the listening center, and a needle for the sewing center. Different pictures were used when centers were changed or added to the center board (i.e. holiday centers, community centers, etc.).

The free-choice center board was arranged so that only five or six children could be in any center at one time. In the beginning, there were very few rules, but rules were made by the teacher as they became necessary. Following are the rules regarding the free-choice center board:

1. Remove only your name from the board.
2. Put your name card in empty spaces only.
3. Be in the center where you have your name.
4. If a given center is full, choose another center.
5. Experience as many centers as you can each day.
6. Don't disturb other people in a center.
7. Be polite and invite someone to play with you.
8. Try a new center before repeating the same center.

Once a child's name was in a space, he could play in the center. When a child wanted to change his name to another center, he would come back to the board, remove his name from the first center, and place his name card in another center. This was a decision generally made by each child with no teacher interference. However, if a student asked for advice from the teacher, she would suggest a center. Some of the children would bring toys from home and ask children to join them in a center to play with those toys. Other children used the toys they brought as a bargaining device to get children to change centers with them. This arrangement encouraged language development and child-child interaction. There were many opportunities for language development during the conversations between the children while they played/worked in each center.

The children would play in the free-choice centers in the early part of the morning. Then from about 10:15 to 10:30 it was

snack time. When snack time arrived, the children in each center were responsible for putting that center in order. If a center was not cleaned up properly, those children were asked to put it in order before they could have their snack.

Food for snacks each day was provided by parents on a rotating basis. Many times the parents would come to the kindergarten and prepare the snack with the children. The variety of morning snacks included eggs, toast, instant breakfast, cereal, and crackers; and in the afternoon the snacks varied from fresh fruit to home-made ice cream. By providing the snacks for the children, the parents felt that they were contributing to the educational program of their children. Every child was offered milk during the snack times. The parents got together and provided money so that all children could have milk.

Snack time was important because it was used to develop math skills in counting. Three different children were assigned each day to go to the kitchen and get the milk. One child counted the milk up to the number ten, while the second child held up the corresponding fingers. The child that was doing the counting was called the "milk counter." When the number ten came up and the second child holding up his fingers had all ten fingers up, it was time for the third child to hold up one finger designating one set of tens. The "milk counter" would begin counting again while the second child held up the corresponding fingers again. This process

was followed until the number of milk cartons needed was accounted for. The children would bring the milk back to the classroom and count each carton as they distributed it.

After snack time the students went to the prescriptive centers:

1. Art.
2. Outdoors.
3. Math.
4. Writing.
5. Language.
6. Perception.
7. Listening.
8. "Talking page."

The children were grouped in the beginning of the year according to their scores on the MRT and the SIT. As the children progressed in language development and mastered other skills in the centers, they were regrouped to suit individual abilities and needs. This regrouping took place three or four times during the year.

The children were aware that they were in different groups. They had been told in the beginning of the year that in order to help each child do his best in learning, it would be necessary to place each child in a group of five or six children. It was also explained to the children that this would enable one to learn at his own rate. It was made clear that this grouping would take

place only in the prescriptive centers and that the children could join any group they wanted at another time during the day. There did not appear to be any stigma attached to any of these groups. The groups were referred to as "Mary's group," or "Jim's group," and "titles" such as the "Bluebirds" or "Redbirds" were never given to any group. The names of different children were used so that no child became too dominant in his group.

Each group had its own starting point for the day and groups progressed around the room through each center until all activities had been completed by all the groups. Activities within each center were different for each group because the activities were designed to meet the needs of each group and of the individuals within that group.

Some of the centers were staffed with parent volunteers, some with the teachers, while other centers did not require any adult direction. This plan allowed for a variety of teaching techniques and many different types of learning activities.

The OWL model did not employ any one type of textbook materials in the prescriptive centers. Instead a variety of materials were used in each center. Because the learning needs of individual children varied, every effort was made to provide appropriate materials to meet these needs.

No attempt will be made to specify step-by-step procedures used in each prescriptive center because what may have been necessary

for the Shawsville children would not necessarily be required for another group of children. The main objective was to diagnose the individual learning needs of each child and then to prepare the appropriate materials for the prescriptive centers. In the following pages, examples are given of the different types of activities that took place within each prescriptive center.

Center 1 - The Art Center (Free-choice and Prescriptive)

The Art Center was designed to allow each child the opportunity to be creative. The center was open twice a day, once in the morning when children were allowed to come into the center and choose whatever art medium he wanted and again during the prescriptive time when some type of activity had been planned for the groups.

During free-choice times, a child's work was never criticized nor was he scolded for being messy. Instead he was always reassured of his ability to be creative. Many times a child wanted to write a story about the picture he had drawn, and an adult (usually a parent volunteer) would write the story in manuscript on the drawing as the child dictated the story. When the story was completed, the child was encouraged to read the story to the adult in the center or to the other children. If he had difficulty in reading the story, the adult would quickly reinforce the words so that the child would not be discouraged. Although this was the Art Center, the writing of the story and the reading of the story

to the other children helped the child in his reading readiness. Thus in the mornings when a child came to the Art Center, it was a child-directed center.

In the prescriptive center time, the Art Center was very structured and was teacher-directed. Different activities allowed for many types of interactions to take place in the Art Center. The main objective of the prescriptive Art Center was to learn to follow directions when using a particular art medium or when working on a project.

Center 2 - The Outdoors Center

The objective of this Outdoors Center was to develop large muscle coordination. In preliminary observation, it was found that many of the five year olds could not skip, run, or hop. Some also had trouble throwing a ball, catching a ball, riding a tricycle and similar activities which they had not been exposed to at home. It was necessary to plan activities so that the children, working in small groups, could improve their coordination.

A parent volunteer directed this center, under the teacher's supervision. Each morning she or he would be given directions by the teacher on how to conduct this center for the individual groups. The teacher would make note of the individual children who needed special attention in certain skill areas, such as running, hopping, or jumping. The teacher reminded each volunteer that this center was one in which accidents could happen and that safety and caution were to be used at all times.

The Outdoors Center contained two large sandboxes, tricycles, balls, tires, large cardboard boxes, large tinker toys, and a huge stump where nails could be driven with a hammer. There was a very large grass playground area surrounding the school which was used for such large muscle activities as running, rolling in the grass, playing leap frog, and similar activities. Part of the time certain activities were specifically prescribed for some children.

Center 3 - The Math Center

The Math Center was designed to develop math skills. The objectives of this center were for each child to be able:

1. To count.
2. To match shapes, colors, sizes, numbers and objects.
3. To identify.

The children first learned to count to the number ten. Once this skill was mastered, the children learned to count to a minimum of thirty-five. This number was selected because it was the number of children enrolled in the kindergarten. When milk and/or snacks were given out, the child responsible for the snack that day would have to count out one milk/snack for each child. This allowed math skills to be used in the everyday happenings of the kindergarten, and it reinforced those concepts learned in the Math Center.

The four basic shapes were used to achieve the objective of matching and identifying. Table toys were used to reinforce the matching and identifying of different objects. Examples of these toys were sticks that could be designed in the four basic shapes, boxes of wooden shapes that could be matched, puzzles, Lincoln Logs, Tinker Toys, and many others.

This center was teacher-directed during the prescriptive time because a teacher would design an activity that each child would do, but during free play it became child-directed. By having many of the same materials for the children to play with that had been used for the learning experience, it was believed that the math skills would be reinforced and enhanced.

Center 4 - The Writing Center

The objectives of the Writing Center were to have each child:

1. Identify the letters of the alphabet.
2. Write his name on his paper.
3. Experience writing on lined paper.

It was not expected that every child in the kindergarten would master all the objectives outlined, but rather that each child would be exposed to the objectives and that he would progress through the objectives as quickly as his ability would allow. The objectives mentioned above are among the first experiences that a child faces upon entering first grade. This does not imply that all children entering first grade can immediately complete these

objectives, nor that a child should wait until the first grade to experience these types of activities. Therefore, these types of activities were introduced into the Writing Center.

The Writing Center employed activities in which every child could succeed. The types of activities that were in this center were common to any writing center used in the first grade. The beginning task was for the child to write his name within the lines. The teacher would write a child's name and the child would then write his name on the lines. The correct capital letters and small letters were always used. The use of the letters in the child's name also reinforced his learning the alphabet. Once this was mastered a child began with lines and circles and followed a basic writing curriculum designed by the teacher. It should be noted that some children in the kindergarten did not possess the ability to write within lines. These children were grouped together and were given many other experiences to aid in the development of their small muscles.

One of the positive points of this center was correcting a child's mistakes. The teacher made a model for the child to follow on his paper. When the child made an error in writing, he would mark through that letter and the teacher showed him how to do it correctly. A child was praised if he found his own mistakes and corrected them. If he overlooked a mistake, the teacher gave him hints as to where a mistake might be, and encouraged him to correct the mistake. The Writing Center was designed to build positive

feelings about writing. During the year many of the children would write stories or letters to their friends. The children were very pleased when they learned to write their own stories about their art projects. Of course, the children asked for help in spelling, and a teacher or volunteer was always there to give help when needed.

The Writing Center was teacher-directed during the prescriptive time, but during other times, for instance in the mornings, the children would independently ask for writing paper so that they could write a story. The teacher would check a child's work and give him help and encouragement whenever needed.

Center 5 - The Language Center

This center was designed to develop the child's verbal skills in which many of the children were lacking. Many were quiet, either not wanting to talk at all, or not wanting to listen to directions.

In the beginning this center was used to talk about sounds made by letters, about sounds made by things, and about how the sounds fit together. One example of the activities in this center was compiling a book called "My Shape Book." The children chose a shape that they liked and that they would like to write a book about. They then collected pictures of this shape and cut out the letters that spelled the name of the shape. They also drew pictures of this shape and made up a story about it. The teacher would write

down the story for those who could not write, and then the children would read the stories to each other. Of course, there was a great deal of teacher assistance in this project, but the objective was to allow the child to make a book, a book of his very own. The motivation to read their own books to others seemed to be very high in most of the children.

By the spring of the kindergarten year, some of the children were reading and had finished Level One of the Ginn 360 text. It had not been one of the objectives to teach the children to read, but reading came naturally in the readiness program for some of the children. Some children became very excited about reading time and looked forward to spending time in this center each day. Their enthusiasm encouraged other children and seemed to work as a source of motivation for others who then also became interested in learning to read. Reading was always kept positive and exciting.

Center 6 - The Perception Center

The Perception Center objectives were to develop skills in cutting, coloring, and perceiving lines on paper. Eye-hand coordination was of the utmost importance in this center. There was no adult direction in this center after the initial instructional period. This was a center that developed independence in working individually within a group. The children were told at the beginning of the day what would be happening in this center. When it was their turn to enter the center, the following instructions were given:

1. Pick up your picture for the day.
2. Choose the colors you wish to use for the picture.
3. Color one way only, either up and down, or left to right. You may color different parts of the picture by using both ways of coloring but never use both ways in the same part of the picture.
4. Always try to use the same amount of pressure in coloring.
5. When you have finished coloring, cut the picture out. You must be careful to observe all the lines or you may ruin your picture.
6. When you complete your work, have it checked by the teacher.

The children were required to adhere to the above rules. The children became aware of lines and of pressure in writing and coloring, and they learned how to use scissors. Many children entering first grade cannot use scissors; however, all the children in this program could use scissors when they completed the kindergarten year although only five had been able to use scissors upon entering the kindergarten.

Center 7 - The Listening Center

The objective of this center was to develop listening skills. The center contained a record player and headphones. The children sat on the floor, put on the headphones, and listened to the record of the day which usually contained a story or a series of songs. A wide variety of records was used, which included fairy stories, musical stories, Walt Disney stories, and stories read with a musical background. Usually one of the children would

turn the record player on and turn the record over when needed. This activity developed responsibility and independence in the children.

The teacher usually chose the record for the children to listen to, but there were times when the children would ask to listen to a particular record or to one which an individual child brought from home.

Center 8 - The Talking Page

The Talking Page was the only center that did not contain teacher-made materials. The Talking Page is a commercial product of Prentice Hall Learning Systems that plays records and utilizes a book that accompanies the record. As the record plays, the pages of the book are turned. The machine asks the children questions and then gives each child time to answer. The machine gives the answer and asks each child if he got the answer right. If a child responds incorrectly, the Talking Page tells him to go back and do this exercise again.

The Talking Page was used as a reinforcing agent because many of the concepts used in the Talking Page program corresponded to objectives of this kindergarten program. Most of the time one child would be appointed to operate the machine for the group. The teacher assigned the lesson for the day, but the children learned how to operate the machine and how to use the center independently.

Each prescriptive center was used for about fifteen minutes. If some of the children did not finish their work at a center, they were allowed to finish it later in the day. The teacher always reminded any children who had not completed the work for the day. At no time did a teacher let the child forget his responsibility to finish his work, whether it be cleaning up a center of completing a paper. The purpose of this procedure was to begin to build a relationship between work and play, and to overcome one of the problems of open-space classrooms, that of children not finishing their work.

Lunch was eaten in the room after the children went through the lunch line and brought their trays to the room. The teachers and the volunteers sat down with the children and ate the same lunch as the children. The teachers and volunteers sat at different tables with the children. This allowed the conversation at the table to be directed toward the food served that day. Questions such as "Is this a fruit or vegetable?" "What animal does this meat come from?" "Why do we eat meat or drink milk?" "Do you eat this at home?" and "Do you like this new food?" were asked. Each child was required to taste everything on his plate every day. If after tasting the food, he did not like it, he did not have to eat it. The child could say, "I don't like it because I have tasted it." The adults talked about the food they liked to eat and why. Although at times it was difficult, the adults made every effort to eat everything on their trays so that the children would be encouraged

to eat all of their food also. By using this method, the eating habits of the children improved, and many of the parents wrote notes telling how their children had improved in their eating habits at home.

When the children had finished eating, they carried their own trays to the kitchen. Time was allowed for the slow eater, with a maximum of 45 minutes allotted for lunch time. Once the children returned to the room from returning their trays, they would gather around a teacher or volunteer to talk while the other children finished eating. The children would share their thoughts about things that had happened that morning; every child was given a chance to talk about himself.

After everyone had finished eating, the children picked up their mats. Each child then found a place where he wanted to rest and placed his mat on the floor. The objective of rest time was for everyone to sleep or at least to lie quietly on his mat so that the other children could sleep.

While everyone was finding a place and getting comfortable on his mat, a teacher went to the microphone that was in the room and began to talk to the children about rest time. She would then sing the song "Angels Watching Over Me, My Lord" as a clue to "quiet time." Sometimes she would tell stories after she had sung this song and sometimes she would sing more songs to the children.

The stories were made up by the teacher and she used many different voices for the characters in her stories. This gave the

children samples of how the voice can be used flexibly. The children especially liked the stories with different voices, and later when they were given the chance to tell stories over the microphone, they would get into the character by using different voices and facial expressions like the teacher had done. The children took turns telling a story or singing a song over the microphone. Hearing their own voices magnified was surprising to many of the shy children. They wanted to talk into the microphone more and more during the year. It was noted that after they had used the microphone a few times, the shy children were talking louder in the classroom. Use of the microphone added a new dimension to the kindergarten, and everyone had a good time both listening to or telling stories.

During this storytelling time, the teachers and the volunteers sat on the floor beside the children and rubbed their backs or helped children get comfortable. Sometimes one of the teachers took a child in her arms and rocked him in the rocking chair that had been given to the kindergarten by one of the parents. One hyperactive child seemed especially to enjoy this period. Cuddling up to the teacher seemed to produce a calming effect on him. Many of the children came over to the volunteers or teachers and asked if that adult would rock them or rub their backs. The adults would move around the room so that all the children could feel the closeness of an adult. The objective of rest time was to make each child feel wanted and loved. Some of these children came from homes

with only one parent, and this seemed to be a time to fill some of the gaps that were missing in their home environment.

After the rest period, the children put away their mats and sat on the floor in their groups. It was now time for enrichment activities. The children would alternate between the music room, physical education room, and the library. When the children returned to the kindergarten room from the day's enrichment activity, it was snack time. The afternoon snack time procedure was the same as that used in the morning. Sometimes this snack was prepared at one of the learning centers during the morning; for example, cookies might have been made in the math center to teach measuring.

After snack time, the children had a choice to make. They could either return to a prescriptive center and finish the work that they had not completed in the morning or return to one of the free-choice activities to work/play. This allowed the child to finish anything he had not completed in the morning, and it also allowed the children to play in centers that they enjoyed. Many times the children would go back to a prescriptive center and make up new experiences for themselves.

Between 2:45 and 3:00 p.m., the children in each center were responsible for cleaning it up and making it ready for the next day. The children went to their cubbies and collected all the papers that they had completed that day as well as all their personal items and lined up for their buses. There were designated

areas for each bus, and each child was responsible to see that everyone who rode his bus was in the proper place. This double checking by the children assured that no child would miss his bus. This also gave each child the important task of being responsible for his friends.

Should there be time, everyone would sit on the floor and the teacher would walk around the room talking about the experiences of the day and what new things would be happening tomorrow. This activity encouraged the children to look forward to school the next day.

When the bus numbers were called out over the loud speaker, the children walked to their buses. The teacher stood at the door patting the children on the head, giving them a kiss, or just hugging them as they went through the door. The teacher always reminded each child that she would see him or her the next day. When the last bus was loaded, the teacher would walk to the front of the building and wave good-bye to the buses as they pulled out. It was important to the teachers that each child felt that he belonged to the kindergarten and that the teacher would miss him -- again reinforcing a pleasant environment at school.

At 3:15 p.m., the day concluded for the children in the OWL model, but the teachers would remain and discuss the problems of the day, the plans for the next day, and any other things that needed attention.

The Role of the Parent Volunteer

Active parental involvement--with the ultimate goal of enhancing the family's ability to respond to its children--is increasingly seen as a given factor in any intelligent approach to early education. In fact, the preschool programs that seem most effective nearly always include a systematic means for eliciting and maintaining parental involvement.

Since there were only two teachers and no aides assigned to the kindergarten, and since no personnel were available in the school who would have the time to help, the parents were the natural resource. Their help had not been utilized in Montgomery County before. The fathers and mothers were invited to participate in the kindergarten as often as they could. Two parents took the responsibility of organizing the parents' group and scheduling two parents to help in the kindergarten each day. Almost every parent participated in some way in the kindergarten. Some of the parents were involved in the selection of materials, others worked in the kindergarten, and others gave money to purchase additional supplies. Some fathers volunteered, and a few adults other than parents participated in the kindergarten program. These included a substitute teacher who worked in the school and a great-grandmother--"Granny." Granny enjoyed the children and in turn the children reacted to her very favorably. The presence of Granny, mothers, and a few fathers rounded out the family concept and the feelings of belonging that this model hoped to achieve.

The volunteers were instructed in the procedures of the kindergarten and of the prescriptive centers. Many of the volunteers were very capable and brought many different and exciting experiences to the kindergarten. Some of the parents learned to operate the various machines in the school, and while the children were at physical education or in the library, the parents would prepare materials needed in the different centers.

The kindergarten had its own "Parent Organization." Meetings were held in the kindergarten every other month to explain the kindergarten curriculum and to inform parents of activities within the kindergarten. At the end of the year, the children gave a program for the parents. This program was an outgrowth of the activities that the children had been involved in throughout the year. It consisted of dramatization of events that had occurred in the housekeeping center, songs that the children had learned in music class, and performance of plays based on stories that had been favorites of the children. The children performed these activities in groups and individually. This program, while bringing the activities of the year to a conclusion, also served the function of informing the parents of the types of learning experiences that had occurred throughout the year.

A close working relationship grew between the parents and teachers. The kindergarten maintained an open door policy, allowing parents to visit at any time during the day. Notes were sent home periodically in order to keep the parents informed of the activities in the kindergarten. It was evident throughout

the year that the parents played an important role in the implementation of the OWL model and in the well being of the children.

The Riner Kindergarten

The Riner kindergarten had the same physical plant layout as the Shawsville kindergarten. Forty children were enrolled and two teachers were assigned to that kindergarten. Materials purchased for the kindergartens by the county were bought in duplicate and divided equally between the Riner and Shawsville kindergartens. Therefore, all the external appearances and materials were the same in both kindergartens at the beginning of the school year. The main difference between the Riner and Shawsville kindergartens was in their curricula. The Shawsville kindergarten was the site of the development of the OWL model while the Riner kindergarten employed a traditionally taught kindergarten curriculum.

The purposes of the Riner kindergarten were:

1. Learning to relate to other children and adults.
2. Developing a positive self-concept.
3. Developing independence and responsibility through decision-making.
4. Increasing awareness of new concepts in the environment while developing interests in preferential areas.
5. Providing a positive atmosphere of love, acceptance, and encouragement in which everyone had the opportunity to succeed.

6. Encouraging self-expression.
7. Developing eye-hand coordination and other readiness skills, such as visual and auditory discrimination.
8. Developing motor skills--small and large muscle coordination.
9. Learning to adapt to various situations.
10. Encouraging good health habits to insure proper physical, mental, and emotional growth.

A typical daily schedule of the Riner kindergarten is presented below with objectives for activities noted in parentheses.

8:00-8:30 Arrival at school.

8:30-9:20 Discovery period--each child was free to choose an area of interest in a learning center, such as housekeeping, blocks, math, listening library, art (sharing and taking turns).

9:20-9:30 Clean-up (responsibility).

9:30-9:40 Snack

9:40-10:00 Physical education--gym equipment, rhythmic exercise, or outdoor movements and exercise (large and small muscle development; coordination, motor skills).

10:00-10:20 Language arts--stories, library period, finger plays, poetry, dramatic play, tape-recording stories.

10:20-10:45 Unit--kindermath, science, or social studies.

10:45-11:25 Lunch

11:25-11:35 Clean up

11:35-12:05	Music--Silver Burdett Series in the classroom; the music teacher worked with the children twice a week in the music room.
12:05-1:30	Quiet time--listening to stories and music.
1:30-1:40	Snack
1:40-2:00	Outdoor play--games and equipment (large muscle development).
2:00-2:20	Art or writing skills (development of eye-hand co-ordination and small muscle coordination).
2:20-2:35	Sharing time (self-expression, evaluation of day, "show and tell" time).
2:35-2:50	Stories and experience charts.
2:50-3:00	Dismissal

The purposes (goals) of the Riner kindergarten and the schedule that was used were not very different from many kindergarten programs, but the program did vary greatly from the OWL model. The Riner kindergarten program focused on the children's emotional and social development, while the Shawsville kindergarten focused on their academic readiness as well as their social and emotional development. The Shawsville kindergarten was very much interested in each child's ability to be successful in the first grade, and thus emphasized the academic thrust. On the other hand, the Riner kindergarten did not emphasize the acquisition of academic skills.

Data Collection

The period during which the data were collected covered two school years, 1972-73 and 1973-74. During this time, data were collected about the children involved in the OWL model and the Riner kindergarten. The data included scores from the following tests.

Data Collected in Both Kindergartens

During the month of October, 1972, Form A of the MRT (Hildreth, et al, 1969) was administered to small groups of eight to ten children in the OWL model and the Riner kindergarten. This test consists of six subtests: word meaning, listening, alphabet, matching, numbers, and copying. The same form was again administered in May, 1973, to both kindergartens. In the fall of 1973, the MRT, Form A, was administered to the first grade children in the Riner and Shawsville schools. Some of the children were no longer enrolled in the same school where they had attended kindergarten; hence, first grade readiness data were not available for all children.

The SIT (Slosson, 1971) was administered during October, 1972. This short intelligence test was given in both kindergartens to determine each child's general learning ability.

During February, 1973, the BTBC (Boehm, 1971) was given to the children in both kindergartens. This test is designed to measure children's mastery of concepts considered necessary for achievement in the first years of school.

Data Collected Only in the Shawsville Kindergarten

The Wechsler Intelligence Scale for Children (WISC, Wechsler, 1958) was administered during the months of January and February, 1973, to the children of the Shawsville kindergarten. The scores of this test were divided into two areas, the verbal score and the performance score.

The Comprehensive Mathematics Inventory (CMI, Rae and Rayes, 1970) was administered during April, 1973. The test is used to measure mathematical knowledge in the areas of money, numbers, vocabulary, geometry, measurement, pattern identification, and recall.

During May, 1974, Form F of the MAT (Durost, 1959) was administered to the first grade class at Shawsville by the first grade teacher. This test yielded subtest scores for word analysis, reading, total reading, and mathematics.

The data for all tests were divided into two areas, verbal scores and performance scores. The general ability scores and the demographic variables were also included in the data to determine their relationship to the verbal and performance scores. Scores included in each area are itemized below:

Verbal scores:

1. The fall, spring, and first grade verbal subtest scores of the MRT (word meaning, listening, and alphabet).
2. The WISC verbal score.
3. The total number of reading tests completed in first grade.

4. The MAT verbal subtest scores (word analysis, reading, and total reading).

Performance scores:

1. The fall, spring, and first grade performance subtest scores of the MRT (matching, numbers, and copying).
2. The WISC performance score.
3. The SIT drawing score.
4. The CMI total score.
5. The mathematics score of the MAT.

General ability:

1. The SIT IQ score.
2. The BTBC total score.

For each child in the Shawsville and Riner kindergartens, personal data representing the following variables were collected.

1. Sex: Male = 1, Female = 2.
2. Age in months.
3. Absences: number of days.
4. Parent participation in the kindergarten: 1 = yes, 2 = no.
5. Father's education: 1 = lowest to 7 = highest as defined on p. 4.
6. Mother's education: same as father's.
7. SES: 1 = lowest to 3 = highest as defined on p. 4.
8. Home environment: 1 = poorest to 3 = best as defined on p. 5.

9. Sociability: 1 = least to 3 = greatest as defined on p. 5.

10. Siblings (number).

Statistical Procedures

In preparation for analysis, the researcher tabulated all data and rechecked for errors. Initially, the computer program BMD03D (Dixon, 1973) was used to obtain means, standard deviations, and various correlation matrices. With the aid of a computer, the data were compiled into tables and charts for interpretation.

To investigate the data for this study, factor analyses were performed on four sets of data. Following is a list of the variables included in each analysis.

Shawsville Kindergarten - Verbal Achievement

1. The 10 demographic variables.

2. The fall, spring, and first grade scores of the MRT on the subtests word meaning, listening, alphabet.

3. The MAT subtests word analysis, reading, and total reading.

4. The WISC verbal score.

5. The Slosson IQ score.

6. The Boehm Test of Basic Concepts (total score).

7. The number of reading tests completed in first grade.

Riner Kindergarten - Verbal Achievement

1. Nine demographic variables, same as for Shawsville with omission of parent participation.

2. The fall, spring, and first grade scores of the MRT on the subtests word meaning, listening, alphabet.

3. The Slosson IQ score.

4. The BTBC total score.

5. The number of reading tests completed in first grade.

Shawsville Kindergarten - Performance Achievement

1. The 10 demographic variables.

2. The fall, spring, and first grade scores of the MRT on the subtests matching, numbers, copying.

3. The MAT subtest math.

4. The SIT drawing score.

5. The WISC performance score.

6. The Slosson IQ score.

7. The CMI total score.

8. The BTBC total score.

Riner Kindergarten - Performance Achievement

1. The nine demographic variables as in verbal achievement.

2. The fall, spring, and first grade scores of the MRT on the subtests matching, numbers, and copying.

3. The Slosson IQ score.

4. The BTBC total score.

The computer program BMD08M (Dixon, 1973) was used to obtain the factor analyses. For each of the analyses, unities were placed

in the diagonal of the intercorrelation matrix, and a principal components extraction was performed to the point at which eigenvalues of less than 1.0 were encountered. A varimax rotation was performed for all factors corresponding to eigenvalues greater than 1.0.

CHAPTER 4

RESULTS

This chapter presents data and accompanying analyses relative to the following areas:

1. Ten demographic variables.
2. A comparison of the fall, spring, and first grade verbal and performance scores of Form A of the MRT (Hildreth, et al, 1969) in the Riner kindergarten with those scores of the Shawsville kindergarten.
3. Factor analyses of the performance scores, verbal scores, and demographic variables in the Riner and Shawsville kindergartens.
4. A comparison of scores from Form F of the MAT (Durost, et al, 1971) and the MRT with national norms.

Demographic Variables

The demographic variables for Shawsville and Riner were very similar in terms of the mean scores and the standard deviations of each variable (Table 1). The Riner children had a slightly higher SES and home environment mean score than did the children in the Shawsville kindergarten in every area except age and parent participation. The external influences were very similar in both kindergartens; therefore, any major difference in achievement scores could be related to the particular curriculum that was implemented in each kindergarten.

TABLE 1

POPULATION OF STUDY - SHAWSVILLE KINDERGARTEN
AND RINER KINDERGARTEN

Variable	Shawsville Number	Shawsville Mean	Standard Deviation	Riner Number	Riner Mean	Standard Deviation	Difference
Sex	35	1.42	.50	40	1.42	.50	0.00
Age (in months)	35	66.85	3.46	26	66.57	3.61	.28
Absences (in days)	27	15.55	9.05	23	16.47	12.10	.92
Parent Participation	34	1.44	.50	28	2.00	0.00	.56
Father's Education	32	2.65	1.59	25	2.72	1.40	.07
Mother's Education	33	2.45	1.17	26	2.92	1.52	.47
SES	35	1.62	.59	26	1.96	.44	.34
Home Environment	35	1.71	.71	25	1.84	.47	.13
Child's Sociability	35	1.80	.71	24	2.04	.46	.24
No. of Siblings	35	2.05	1.49	26	2.34	1.52	.29
Slosson IQ	33	109.76	15.91	21	116.62	21.16	6.86

Comparison of Mean Scores of the Shawsville and Riner Kindergarten on the Subtests of the MRT

In the fall the mean scores of the Shawsville children and those of the Riner children were similar (Table 2). The Shawsville children had a higher mean score only on the subtest word meaning and listening. The Riner children scored a higher mean score on subtests alphabet, matching, numbers, and copying. The Riner children's total mean score was 4.59 points higher than that of the Shawsville children or about the difference of one-third of one standard deviation. Apparently, some children in the Riner kindergarten had been exposed to learning situations which some of the children in the Shawsville kindergarten had not. The higher SES mean score would suggest that the Riner kindergarten represented more families who could afford better learning materials for their children.

In the spring testing of the MRT, the Riner children scored higher (.03) only in the area of word meaning. In all the other five subtests, the Shawsville children's mean scores were higher. The Shawsville kindergarten's total mean score was 10.11 points higher than the Riner total mean score or one standard deviation higher. When the mean scores are compared with the national norm for the MRT spring testing, Riner ranks in the upper part of the average range and Shawsville ranks in the high range. Thus in the spring testing it appeared that both kindergartens were equally successful in teaching word meaning, but the Shawsville OWL model

TABLE 2

A COMPARISON OF THE FALL, SPRING AND FIRST GRADE MRT VERBAL AND PERFORMANCE SCORES OF RINER AND SHAWSVILLE KINDERGARTEN

Variable	Fall Number	Fall Mean	Fall Standard Deviation	Spring Number	Spring Mean	Spring Standard Deviation	First Grade Number	First Grade Mean	First Grade Standard Deviation
V E R B A L									
Shawsville Kindergarten									
Word Meaning	35	7.34	2.40	30	9.86	4.36	27	9.59	2.29
Listening	35	9.71	2.30	30	12.33	2.00	27	11.48	2.06
Alphabet	35	5.80	4.49	30	12.53	3.63	27	11.48	3.64
Riner Kindergarten									
Word Meaning	40	6.96	2.96	37	9.89	2.69	23	10.86	2.95
Listening	40	9.22	2.56	37	10.56	2.47	23	12.13	2.09
Alphabet	40	7.95	4.36	37	7.40	3.91	23	11.39	4.29
P E R F O R M A N C E									
Shawsville Kindergarten									
Matching	35	5.97	2.41	30	10.86	2.23	27	9.18	2.09
Numbers	35	7.60	3.30	30	14.16	4.25	27	13.33	5.00
Copying	35	4.17	3.06	30	10.40	2.67	27	9.40	3.29
Riner Kindergarten									
Matching	40	6.25	2.90	37	7.40	3.91	23	9.08	3.04
Numbers	40	8.42	3.08	37	11.97	3.57	23	14.08	4.20
Copying	40	6.22	3.89	37	8.78	4.72	23	9.08	3.21
TOTAL SCORE:									
SHAWSVILLE	35	40.46	13.60	30	69.19	10.03	27	62.86	14.64
RINER	40	45.05	14.54	37	59.08	17.50	23	66.39	15.36

National Norm: Low = 24-44
Average = 45-63
High = 64-76

achieved greater success in the areas of listening, alphabet, matching, numbers and copying.

In comparing the mean scores from the first grade MRT subtests, the Riner children scored higher in the verbal skills of word meaning and listening and in the performance skill of numbers. The Shawsville children's mean score was higher on the verbal skill alphabet and on the performance skills matching and copying. The Riner total mean score was only 3.53 points higher than the Shawsville kindergarten's total mean score which is a difference of about one-fifth of one standard deviation.

This gain in Riner's mean scores could suggest that over the summer some type of learning occurred in some homes of the children that did not occur to as great an extent in the homes of the Shawsville children. Or another explanation could be that not all the children who attended the Riner kindergarten for the 1972-73 year continued on into the first grade at the Riner Elementary School.

The school district was divided, and about one-half of the children who had attended the Riner kindergarten were sent to first grade at Bethel Elementary School. Many of those children who were transferred to Bethel lived in poorer home environments such as mobile homes, low rent housing, or lived with their relatives. These children also had a lower SES rating. The children who remained in the Riner School were from families who had large farms or owned small businesses.

In the fall testing there were 40 children involved at the Riner kindergarten and 35 at the Shawsville kindergarten. In the spring testing there were 37 children involved at the Riner kindergarten and 30 in the Shawsville kindergarten. In the first grade testing there were 23 children involved at the Riner kindergarten and 27 in the Shawsville kindergarten. While the Shawsville kindergarten population remained about the same into the first grade, only about one-half of the Riner children remained for first grade.

To summarize the comparisons, both kindergartens began in the fall at about the same level in verbal and performance skills, but after completing the OWL model, the Shawsville children surpassed the Riner children in every area of the spring MRT subtests except word meaning, with the Riner score being only .03 higher. This would suggest that the success of both models was approximately equal in teaching word meaning. However, the OWL model was more successful in teaching listening, alphabet, matching, numbers, and copying. The first grade testing disclosed that in every area of the MRT subtests, the Riner children's scores were higher than their spring scores. This was explained by the altered school districts. In spite of this change and in addition to the expected decline of achievement over the summer, the Shawsville children remained more capable in the areas of alphabet, matching, and copying, while the Riner children scored higher in word meaning, listening, and numbers. According to the first grade MRT testing, it appears that the OWL

model was at least as successful as the traditional model in building verbal and performance skills.

Factor Analyses of the Performance Scores, Verbal Scores, and 10 Demographic Variables in the Riner and Shawsville Kindergartens

The data collected in this study were subjected to four factor analyses to verify the validity of the instruments (MRT and MAT) in measuring achievement. The interpretations of these analyses yielded some interesting conjectures about the effectiveness of the OWL model as opposed to the traditional model. The variables that were used in the factor analyses are described in detail in Chapter 3.

Verbal - Shawsville Kindergarten

By first examining the factor matrices (Table 3), the factor with the greatest number of high loadings is revealed to be factor one, which is related to achievement. The variables that would logically be associated with achievement in nearly all cases receive heavy loadings in this factor, whereas the other variables in this study received heavy loadings in factors that would seem to be associated with personality traits, home environments, or some other underlying characteristics of the population.

Factor two suggests that the parents who were from a lower SES background and a poorer home environment participated more frequently in the Shawsville kindergarten activities. This can be explained by the fact that some parents did not work at all and

TABLE 3

VARIMAX ROTATED FACTOR MATRIX FOR
VERBAL ACHIEVEMENT OF SHAWSVILLE KINDERGARTEN

Variables	Factors 1	2	3	4	5	6	7
1. Sex	-.05	.19	.01	-.82*	.02	.13	.16
2. Age	.13	.01	-.01	.09	-.03	.90*	.02
3. Absences	-.03	-.15	.08	-.22	.03	.02	.90*
4. Parent Participation	.05	.79*	.11	-.26	.03	-.18	-.05
5. Father's Ed.	.16	-.21	-.05	-.05	.85*	.03	-.18
6. Mother's Ed.	.31	-.31	-.03	.05	.72*	-.08	.32
7. SES	.21	-.73*	.11	-.15	.43	-.07	.14
8. Home Env.	.24	-.77*	.12	.09	.29	-.15	.01
9. Sociability	.06	-.09	.67*	.46	.01	.47	-.18
10. Siblings	-.04	.08	-.86*	.06	.12	.05	-.10
MRT FALL							
11. Word Mean	.61*	-.09	-.03	.38	.36	.19	.06
12. Listening	.35	.04	-.49	.25	-.04	-.02	.43
13. Alphabet	.73*	.07	-.00	-.01	.32	.29	.08
MRT SPRING							
14. Word Mean	.56*	-.25	-.03	.11	-.12	.21	-.08
15. Listening	-.03	-.29	-.52*	-.03	-.38	.21	-.27
16. Alphabet	.72*	.00	.38	.08	.36	-.13	.11
MAT - 1st.							
17. Word Ana.	.92*	-.04	-.06	-.08	.09	-.15	.05
18. Reading	.79*	-.06	.54*	.05	-.04	.31	-.21
19. Total Reading	.88*	.03	.03	.03	.32	.03	-.20
20. WISC Verbal	.70*	-.11	.01	.37	-.00	.12	-.05
21. Slosson IQ	.76*	-.42	.18	.23	-.05	-.14	.25
22. BTBC	.78*	.05	-.05	.38	.17	.23	.15
23. No. Reading Test Comp.	.79*	-.21	-.05	.37	.25	-.16	.09

*Variables with loading high enough (.50) to be considered a component in the factor.

others were employed and therefore had the time to work in the kindergarten.

Factor three suggests that the more sociable a child was the better he was in reading, and the less sociable a child, the better he was in listening. Also, the more sociable a child was the more siblings he had.

Factor four shows that the age of the child is not related to any of the variables used in this study.

Factor five indicates that the mother and father's educational background were similar.

Factor six shows that the age of a child is not related to any of the variables of this study.

Factor seven indicates that being absent did not affect any of the other variables.

Verbal - Riner Kindergarten

Factor one (Table 4) is similar to the results under factor one for the Shawsville kindergarten, but the mother's education and the home environment also loaded on this factor. The Riner kindergarten child's achievement is related to his environmental influences. In the case of the Riner children, factor one suggests that a traditional kindergarten model supports the child's relationship to the mother and the home environment. In contrast the OWL model overcame the influences of home environment and the mother's education.

TABLE 4

VARIMAX ROTATED FACTOR MATRIX FOR
VERBAL ACHIEVEMENT OF RINER KINDERGARTEN

Variables	Factors 1	2	3	4	5	6
1. Sex	.11	-.16	.10	.84*	-.06	.01
2. Age	.17	-.12	.47	-.09	.17	.74*
3. Absences	-.02	-.18	-.89*	-.10	.23	-.04
4. Father's Ed.	-.38	.17	.01	-.07	.75*	-.27
5. Mother's Ed.	-.64*	.35	.04	.06	.47	-.06
6. SES	-.09	.72*	.02	.18	.53*	.03
7. Home Environment	-.64*	.08	-.04	-.23	.14	.11
8. Sociability	-.07	.82*	.11	-.37	.09	-.07
9. Siblings	.12	.07	.15	.05	-.79*	-.32
FALL MRT						
10. Word Meaning	-.50*	.31	-.59*	.08	-.10	.31
11. Listening	-.52*	-.38	-.42	-.11	-.24	.19
12. Alphabet	-.66*	.24	-.19	.55*	.03	.19
SPRING MRT						
13. Word Meaning	-.84*	.12	-.21	-.05	-.20	.16
14. Listening	-.72*	.15	.34	.24	.20	.08
15. Alphabet	-.79*	.03	-.04	.39	.23	-.11
16. Slosson IQ	-.91*	.08	-.17	-.01	.19	-.21
17. BTBC	-.74*	-.10	-.22	.01	.17	-.18
18. No Reading Test Completed	-.82*	-.39	.16	.02	.09	-.16

*Variables with loading high enough (.50) to be considered a component in the factor.

Factor two relates the SES to the sociability of a child. The higher the SES of the Riner child's home, the more sociable the child.

Factor three implies that the more a child was absent, the higher his score in word meaning. This relationship is assumed to be accidental.

Factor four shows that females did better on the alphabet than did males. This could be due to earlier maturation of the girls compared to the boys.

Factor five relates the father's education with the SES and the number of children in the family. The more educated the parent, the fewer siblings.

Factor six is the age factor, and in the Riner kindergarten age did not appear to be associated with any other variable analyzed.

As can be seen by comparing the verbal factor analyses of Riner with those of Shawsville, achievement was the first factor, and in the Riner kindergarten the mother's education and the home environment loaded on this factor, implying that the OWL model overcame these two influencing factors.

Performance - Shawsville Kindergarten (Table 5)

Factor one is the same as factor one in the verbal factor analysis.

Factor two has the same loading pattern as the verbal factor analysis, but also suggests that the boys' parents participated more.

TABLE 5

VARIMAX ROTATED FACTOR MATRIX FOR
PERFORMANCE ACHIEVEMENT OF SHAWSVILLE KINDERGARTEN

Variables	Factors 1	2	3	4	5	6	7
1. Sex	-.15	.61*	-.11	-.53*	.14	-.20	-.24
2. Age	.16	-.02	.08	.03	.82*	.40	-.16
3. Absences	.01	-.12	-.02	-.88*	-.07	-.03	-.02
4. Parent Participation	-.02	.76*	.11	.03	-.22	.11	.17
5. Father's Ed.	.22	-.02	-.00	.17	.05	-.88*	-.14
6. Mother's Ed.	.46	-.22	-.08	-.19	-.20	-.65*	-.05
7. SES	.14	-.54*	.12	-.25	-.01	-.67*	.18
8. Home Env.	.11	-.69*	.21	-.11	-.19	-.43	-.18
9. Sociability	.15	-.12	.77*	.25	.16	.08	-.24
10. Siblings	-.00	-.02	-.85*	.26	-.04	.00	-.18
MRT FALL							
11. Matching	.58*	.06	.16	.50*	.15	.17	.04
12. Numbers	.84*	-.05	.03	-.08	.21	-.10	-.16
13. Copying	.69*	.13	-.08	-.25	.16	-.37	.19
MRT SPRING							
14. Matching	.12	.05	-.60*	-.21	.44	.38	.28
15. Numbers	.81*	-.06	.05	-.01	.21	-.12	-.06
16. Copying	.63*	-.06	.02	.07	.28	-.14	.48
17. MAT - Math	.86*	-.11	-.22	-.05	.02	-.26	.04
18. SIT Drawing	.18	-.25	.10	-.06	.34	-.18	-.73*
19. WISC Performance	.66*	.26	-.08	.15	-.33	-.12	.05
20. Slosson IQ	.64*	-.48	.21	-.22	-.35	-.00	.25
21. CMI	.79*	-.22	.18	.05	-.09	-.18	.05
22. BTBC	.83*	-.14	.09	.09	-.00	.03	-.08

*Variables with loading high enough (.50) to be considered a component in the factor.

Factor three indicates that the more sociable a child, the fewer siblings he has. Also, this child scores less in matching.

Factor four shows that the boys were absent less, yet scored more poorly in matching than did the girls.

Factor five shows that age does not relate to any of the variables analyzed.

Factor six indicates that the mother and father's educational backgrounds were similar and influenced their SES.

Factor seven shows that the SIT drawing test is not related to any other variable analyzed.

Performance - Riner Kindergarten (Table 6)

Factor one is the same as factor one in the verbal factor analysis.

Factor two shows that the more siblings a child had, the fewer times he is absent, and the better he is in numbers.

Factor three shows that age is not related to any other variable analyzed.

Factor four indicates the lower the parents' educational level and SES, the more children they have.

Factor five relates the sex of a child with his or her sociability. The males of the Riner kindergarten were less sociable than the females. This could suggest that girls enjoy the traditional kindergarten better than boys do.

TABLE 6

VARIMAX ROTATED FACTOR MATRIX FOR
PERFORMANCE ACHIEVEMENT OF RINER KINDERGARTEN

Variables	Factors 1	2	3	4	5
1. Sex	-.01	.04	.01	.05	.83*
2. Age	-.01	.10	.93*	-.07	-.01
3. Absences	.07	-.83*	-.22	-.04	-.04
4. Father's Ed.	.31	-.09	-.16	-.77*	-.00
5. Mother's Ed.	.59*	.11	-.14	-.64*	-.09
6. SES	.07	.20	.03	-.82*	-.13
7. Home Environment	.58*	-.12	-.05	-.14	-.39
8. Sociability	.05	.46	-.15	-.25	-.54*
9. Siblings	-.08	.51*	-.16	.64*	.05
MRT FALL					
10. Matching	.75*	-.13	.31	.03	.12
11. Numbers	.46	-.67*	.06	.04	-.08
12. Copying	.55*	-.38	.38	.06	.48
MRT SPRING					
13. Matching	.81*	.08	.10	-.07	.26
14. Numbers	.75*	-.12	-.01	-.21	-.21
15. Copying	.85*	-.10	.04	-.06	-.30
16. Slosson IQ	.78*	-.09	-.43	-.26	-.16
17. BTBC	.79*	-.24	-.32	-.09	.07

*Variables with load high enough (.50) to be considered a component in the factor.

Summary of the Factor Analysis in Both Kindergartens

An examination of Tables 3, 4, 5, and 6 suggests that the OWL model was more effective than the traditional model in overcoming the influences of a child's home background on his or her achievement. For instance, in Table 4, which shows the factor matrix generated using verbal scores from Riner, both the mother's education and the home environment variables receive heavy loadings in the achievement factor. On the other hand, Table 3, which shows the factor matrix generated using verbal scores from Shawsville, reveals that no demographic variable received a loading above .50. Because of the low number of subjects in this study, 35 children at Shawsville and 40 children at Riner, .50 was chosen as a conservative factor loading. In the case of the Shawsville kindergarten, the factors reveal a clear lack of relationship between achievement variables and demographic variables, but in the case of the Riner kindergarten, this relationship is not nearly so distinct. This association of demographic variables with achievement variables in the Riner analysis does suggest that the traditional teaching methods used at Riner did not overcome home influences as well as the OWL model.

The factor loadings in each analysis clearly defines the first factor as achievement, with the other variables loading on factors two through seven. This verifies the validity of the tests used to determine achievement. All the other variables loaded heavily on the other factors, and each loading was plausible and could be

interpreted; therefore, it is assumed that the data used in this study were valid.

Comparison of the MAT and MRT with National Norms

When comparing the standard MAT score of the Shawsville kindergarten with the national norms of the MAT (Table 7), the data clearly indicate that the scores are in the average normal range, and that the children were working at grade level, with scores in word knowledge being the lowest and in total reading being the highest.

The Shawsville children's fall MRT test began the year with the children in the low normal range, but at the spring testing of the MRT, they scored in the high normal range (Table 2). When they were retested in the fall of first grade, the Shawsville children scored in the average range, but they missed the high normal range by only .14 of a point on the mean score. This would suggest that the Shawsville children retained many of the skills that they learned in kindergarten.

In Table 2 the Riner kindergarten children's scores on MRT test for the fall ranked in the average range and again in the spring the Riner children's scores fell into the average range. When these children were tested again in the fall of first grade, the children scored in the high normal range. The Riner children's scoring higher on the first grade MRT was explained by the division of those children into two school districts at the beginning of first grade and by the fact that those children who had been removed

TABLE 7

SHAWSVILLE MAT SCORES

Variable	Mean Standard Score N = 35	Staine	Percentile Rank*
Word Knowledge	35.6	4	36
Word Analysis	36.8	5	46
Reading	39.3	5	49
Total Reading	39.8	5	50
Total Math	42.2	5	50

*National Norm

from the Riner school were those of lower SES from poorer home environments.

In studying the comparison of the Shawsville kindergarten scores with those from Riner, the data suggest that most of the Shawsville children came to school with limited experiences in verbal and performance skills and that as they were exposed to the OWL model, their verbal and performance skills were enhanced. The carry-over of these skills into the first grade seemed to indicate that the methods used in teaching these skills had a lasting effect on the children of the Shawsville kindergarten.

Summary

It is concluded that the children who participated in the OWL model were adequately prepared for the first grade and their achievement toward readiness is at least as good as that of the children in the Riner kindergarten where a traditional approach was used. The OWL model participants appeared to be somewhat better prepared in the performance areas of matching and numbers.

This finding confirms the researcher's thesis that the OWL model's prescriptive centers did aid in the children's academic achievement and readiness for first grade. Hopefully, their activities in the free-choice centers also enhanced their social and emotional development, even though no data were collected to verify development in these areas.

CHAPTER 5

SUMMARY AND CONCLUSIONS

It was the purpose of this research to develop and implement at Shawsville Elementary School a kindergarten program which would expose the students to activities and organizational patterns similar to those used in an open classroom first grade. This program was called the Oh We Learn (OWL) kindergarten curriculum model.

The researcher felt that the OWL model would offer opportunities for verbal and performance achievement that were not offered in a traditional program.

The study design included administering the Form A of the Metropolitan Readiness Tests (MRT, Hildreth, et al, 1969), Form F of the Metropolitan Achievement Tests (MAT, Durost, 1971), Slosson Intelligence Test for Children and Adults (Slosson, 1971), Wechsler Intelligence Scale for Childres (Wechsler, 1958), the Boehm Test of Basic Concepts (Boehm, 1971), and the Comprehensive Mathematics Inventory (Rea and Reys, 1970) to secure data for this study.

Means and standard deviations and the relationship between the MRT for fall, spring, and first grade were analyzed. In addition, 10 demographic variables were used for comparative study. Four factor analyses were completed on the verbal scores and performance scores of the Riner and Shawsville kindergartens. Also, the fall, spring, and first grade scores of the MRT for both kindergartens were

compared to national norms, and the MAT scores of the Shawsville kindergarten were compared to national norms.

Chapter 4 presents detailed analyses of the data collected. A summary of the pertinent findings follows:

1. Very little difference appeared between the Shawsville demographic variables and the Riner demographic variables.

2. In the fall the verbal abilities of the Riner and the Shawsville children were basically the same, with Shawsville scoring higher in word meaning and listening.

3. In the fall the performance scores of the Riner children were higher in every area.

4. In comparing the spring MRT of the Riner children with that of the Shawsville kindergarten, the Shawsville kindergarten scored higher in every area except word meaning.

5. The Riner children had a higher score on the MRT in first grade than they did in the spring testing. This was explained by the changing of many of the low SES children to another school district.

6. In comparing the first grade MRT scores, the Shawsville kindergarten scored higher in alphabet, matching, and copying. The Riner kindergarten scored higher on word meaning, listening, and numbers. This was in spite of the change in school population and the expected decline of achievement over the summer.

7. In the Riner kindergarten the mother's education and the home environment loaded the achievement factor.

8. In the Shawsville kindergarten the use of the OWL model seemed to overcome the influences of the home environment and the mother's education on achievement.

9. According to national norms, the fall MRT test scores showed the Shawsville kindergarten to rank in the low normal range and the Riner children in the average range.

10. According to national norms, the spring MRT test scores showed the Shawsville kindergarten to rank in the high normal range and the Riner children in the average range.

11. According to national norms, the first grade MRT test scores showed the Shawsville kindergarten to rank in the average range and the Riner children in the high normal range. This was explained by the altered division of the school district.

12. In comparing the MAT scores of the Shawsville kindergarten with national norms, all the scores ranked in the average normal range, with word knowledge being the lowest and total reading being the highest.

13. The OWL model seemed to overcome home environment influences better than did a traditional model.

14. The results of this study lead to the conclusion that the OWL model did prepare the Shawsville children for first grade experiences and that their achievement would be at least as good as those children who participated in a traditional kindergarten program.

Discussion

The main concern of this study is that the OWL model overcame much of the effect of the home environment and SES on achievement. Because the relationship between the home, SES, and the readiness for first grade is so important, it is felt that the OWL model would be a good model to follow for a rural area, where in many cases the home environment may be lacking in educational materials.

Also, the verbal scores and performance scores of the Shawsville children were increased considerably from the fall to spring as measured by the MRT. These higher scores were retained over the summer, suggesting that the procedures used in the OWL model were carried over to first grade. The Shawsville performance scores revealed a high gain also. This outcome could indicate that the use of mathematical skills in the every day happenings of the Shawsville kindergarten helped the children to master basic concepts more readily.

Four factor analyses were performed with the major result indicating that the home environment and the mother's education comprised a variable which exerted a high influence on the Riner children's achievement in both verbal and performance skills; however, in the Shawsville kindergarten no variable was shown to influence achievement. Thus the OWL model overcame these two important variables as well as all the other demographic variables used in this study.

Replications

Should an attempt be made to replicate this study in another school in a rural area, there are certain external factors that could not be duplicated. However, there are certain aspects that could be duplicated. A list follows of those aspects that can and cannot be duplicated.

Can be duplicated:

1. Flexible space.

2. Centers set up for free-choice activity.

3. Centers set up for prescriptive activity.

4. Prescriptive centers correlated with first grade academic skills.

5. Parent involvement and, in particular, a parent organization that is kept up to date on the activities of the kindergarten.

Cannot be duplicated:

1. Personality of the teacher.

2. Material used in the prescriptive centers to diagnosis and prescribe.

3. Individual attention given to each child by the teachers.

4. The attitude of the teachers about teaching, learning and children.

Suggestions for Further Research

1. If any future study of the implementation of the OWL kindergarten curriculum model be undertaken, a longer period of longitudinal research of the children should be considered.

2. A study should be made to determine what intervention takes place in the homes over the summer. These findings could determine what steps should be taken to maintain the readiness of a child through the summer.

3. A study should attempt to determine the variant effects of the OWL model and a traditional model on boys and girls.

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VITA

Okie Lee Wolfe was born in Middlesboro, Kentucky, on April 7, 1944. She completed her secondary education at Middlesboro High School in 1961. She had worked in the summer and after school to complete the necessary hours for her cosmetology license which she received in the summer of 1961. She worked in the Professional Beauty Salon, Knoxville, Tennessee, in 1961-62. She then moved to Athens, Georgia, where she worked as a secretary at the Westminister House, University of Georgia, during the 1962-64 school years.

She returned to Middlesboro, Kentucky, in 1965 and entered college. She graduated from Union College, Barbourville, Kentucky, in December, 1969, and upon graduation was employed as a business education teacher at Lone Jack Elementary School, Four Mile, Kentucky.

She moved to Martinsville, Virginia, and was employed as a first grade teacher at Rich Acres Elementary School for 1969-70. Deciding to go on to graduate school, she entered East Tennessee State University, Johnson City, Tennessee. As a graduate assistant, she taught Introduction to Education and Foundations of Education at ETSU. She received a Masters of Arts degree in elementary education in June, 1971.

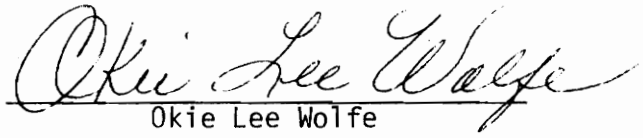
She came to VPI & SU to pursue fulltime graduate study for the Doctor of Education degree in Administration and Supervision, and she served as a coordinator of student teachers in kindergarten and elementary schools during the 1971-72 school year. The next year she undertook the development of the Oh We Learn kindergarten

curriculum model at the Shawsville Elementary School, Shawsville, Virginia, where she was employed as a full time kindergarten teacher during the 1972-73 school year.

In the fall of 1973 she was asked to serve as Chairperson of the Education Division at Lincoln Memorial University, Harrogate, Tennessee. She accepted the position and continues to serve in that capacity.

Okie Lee Wolfe is married to Stephen Lynn Wolfe of Harrogate, Tennessee, and they have two children, David Petersen and Tiffany Leigh. At the time of the completion of her dissertation, she was expecting her third child.

The author has been active in civic and professional organizations. She is a member of American Association Colleges for Teacher Education, Tennessee Association of Colleges for Teachers Education, Teacher's Educational Council of The National Association of Cosmetology Schools, and The American Association of University Professors.



Okie Lee Wolfe

A CURRICULUM MODEL FOR AN OPEN SPACE RURAL KINDERGARTEN

by

Okie Lee Wolfe

(ABSTRACT)

The purpose of this study was to develop and implement a kindergarten program that would acquaint children with activities and organizational patterns used in an open-classroom first grade. To accomplish such a program, the Oh We Learn (OWL) kindergarten curriculum model, which utilizes free-choice centers for emotional and social development and prescriptive centers for structured academic readiness activities preparing children for the transition and success in first grade, was developed.

The Shawsville Elementary School, Shawsville, Virginia, was chosen as the site to implement the OWL model, while the Riner Elementary School, Riner, Virginia, which used a traditional curriculum, was chosen as a comparison kindergarten.

Ten demographic variables were used to establish the population and to serve as factors influencing readiness. They were:

1. Sex.
2. Age.
3. Absences.
4. Parent participation in the kindergarten.

5. Father's education.
6. Mother's education.
7. Socio economic status.
8. Home environment.
9. Child's sociability.
10. Siblings.

In the fall, spring, and first grade, verbal and performance abilities in both kindergartens were measured by subtests of the Form A of the Metropolitan Readiness Tests (MRT, Hildreth, et al, 1969). The Boehm Test of Basic Concepts (Boehm, 1971) and the Slosson Intelligence Test for Children and Adults (Slosson, 1971) were also used to gather comparison data in both kindergartens.

Additional data collected on the Shawsville kindergarten included the scores of the Wechsler Intelligence Scale for Children (Wechsler, 1958), the Comprehensive Mathematics Inventory (Rea and Reys, 1970), and the Metropolitan Achievement Tests (MAT, Durost, 1971).

Summated scores for the Shawsville and Riner kindergartens were used as a primary basis for analysis. Means of summated scores for the 10 demographic variables and the subtests of the six instruments were analyzed for each kindergarten. Factor analysis was used to determine the underlying factors affecting achievement.

Pertinent findings from this study include the following:

1. Very little difference appeared between the Shawsville demographic variables and the Riner demographic variables.

2. In the fall the verbal abilities of the Riner and the Shawsville children were basically the same, with Shawsville scoring higher in word meaning and listening.

3. In the fall the performance scores of the Riner children were higher in every area.

4. In comparing the spring MRT of the Riner children with that of the Shawsville kindergarten, the Shawsville kindergarten scored higher in every area except word meaning.

5. The Riner children had a higher score on the MRT in first grade than they did in the spring testing. This was explained by the changing of many of the low SES children to another school district.

6. In comparing the first grade MRT scores, the Shawsville kindergarten scored higher in alphabet, matching, and copying. The Riner kindergarten scored higher on word meaning, listening, and numbers. This was in spite of the change in school population and the expected decline of achievement over the summer.

7. In the Riner kindergarten the mother's education and the home environment loaded the achievement factor.

8. In the Shawsville kindergarten the use of the OWL model seemed to overcome the influences of the home environment and the mother's education on achievement.

9. According to national norms, the fall MRT test scores showed the Shawsville kindergarten to rank in the low normal range and the Riner children in the average range.

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11. According to national norms, the first grade MRT test scores showed the Shawsville kindergarten to rank in the average range and the Riner children in the high normal range. This was explained by the altered division of the school district.

12. In comparing the MAT scores of the Shawsville kindergarten with national norms, all the scores ranked in the average normal range, with word knowledge being the lowest and total reading being the highest.

13. The OWL model seemed to overcome home environment influences better than did a traditional model.

14. The results of this study lead to the conclusion that the OWL model did prepare the Shawsville children for first grade experiences and that their achievement would be at least as good as those children who participated in a traditional kindergarten program.