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ABSTRACT

This study was designed to describe the signs that influence the literacy learning activities of kindergarten children as expressed in their writing performances and processes. A naturalistic inquiry was made of 24 kindergarten children to determine (1) observable differences in children's writing performances according to developmental progressions, sex, and free choice topics; (2) contextual signs that are available and used by the children in the process of producing written communication; and (3) the way children, their parents, and the teacher interpret writing as it relates to form, function, and process. Classroom observations, audio recordings of events, surveys, photographs, and interviews were combined with the children's writing samples to determine the application of semiotic analysis. The data revealed different writing progressions ranging from random scribbles to conventional spellings. The study of the social context indicated that peer involvement was the major influence on individual writing performances, with other factors including the teacher's instructional stance, the classroom arrangement, the schedule, and the available materials. The children, their parents, and the teacher responded to different criteria for rating written expression, but all respondents perceived writing to be necessary for learning. (Author/HOD)

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A SEMIOTIC LOOK AT  
KINDERGARTEN WRITING

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## ABSTRACT

The purpose of this study was to describe the signs that influence the literacy learning activities of a group of kindergarten children as expressed in their writing performances and processes. Sign interpretations were provided by the children, their parents, and the teacher.

This naturalistic inquiry involved multiple data sources that were organized in three phases to study the writing performances, the writing processes, and the writing interpretations within a social and situational context. Classroom observations, audio recordings of events, surveys, photographs, and interviews were combined with the children's writing samples to determine the application of semiotic analysis.

The data revealed differing writing progressions that ranged from random scribbles to conventional spellings. The study of the social context indicated that peer involvement was the major influence on individual writing performances. Other important factors included the teacher's instructional stance, the classroom arrangement, the schedule, and the available materials. The children, their parents, and the teacher responded to different criteria for rating written expression, but all respondents perceived writing to be necessary for learning. These and other findings provided the basis for the theoretical memos that suggest curricular implications for kindergarten classrooms and further research possibilities.

## A SEMIOTIC LOOK AT KINDERGARTEN WRITING

In a kindergarten class where "Reading Is Important Week" was being celebrated, the children were involved in various activities that focused on reading, writing, listening, and talking about books. For this particular activity, the teacher asked the children to look at their favorite books and choose one for a writing response. They could illustrate their favorite parts or respond in other ways as long as some writing was involved. The following conversation occurred during the activity:

Child A: I've done my picture, but I don't know what to say.

Child B: I will help you. What is your picture about?

Child A: It's about a goblin, but I don't know how to spell goblin.  
Can you write it for me?

Child B: Sure, it goes like this (She wrote G-O-B-L-F-N).

Child A: Yeah--that looks like goblin. Could you write the rest of  
it for me?

Child B: I think you can write it if you think about how it goes.  
What else do you want to say?

Child A: They ain't scary.

Child B: Okay, I will help you.

After discussing the reasons why goblins were not scary, the two girls tried to decide how to spell "ain't." Finally they decided to write, "They aren't real" (THE ARTE REWL!).

This is one of the many examples of collaborative learning that occurred in a kindergarten where literacy was expected and encouraged. This particular study examined the context of a kindergarten setting where writing was viewed as an important literacy event. A semiotic focus was incorporated to identify

the signs and signals of meaning potential that were interpreted and used by the young learners.

Any study of literacy is dependent on context, both cultural and situational. Halliday (1978) in describing language as a social semiotic, proposed that we communicate meaning through selecting from a set of semantic options that are embedded in context. These options are associated with a particular situation or social context. In order to gain understanding of early expressive literacy and how meaning is represented, one must study the classroom setting, the participants, and the expressions of meaning.

The question of how children progress from expressive semantic options in speech to meaningful graphic representation is an intriguing one. Various researchers have shown an interest in the transition. Some major research involved the investigation of writing products through analyzing units of language, such as syntactic complexity, vocabulary items, spelling patterns, or other structural features (Beers, 1975; Beers & Beers, 1980; Chomsky, 1971; Clay, 1975; Hunt, 1965; Loban, 1963, 1976; O'Donnell, Griffin & Norris, 1967; Read, 1971, 1975).

In the last few years, there has been more emphasis on investigating the writing process than on analyzing written products. This shift included a focus on understanding writing as a means of communication. Several studies examined children's concepts of written language, cognitive development, performance levels or stages, or other process related topics (Ferreiro, 1977; Ferreiro & Teberosky, 1982; Goodman & Altwerger, 1981; Harste, Burke & Woodward, 1981, 1984; Hiebert, 1978).

Graves (1973) also collected observational data on developing writers who were actively involved in the process and reported his findings in a case study format. Many interested researchers have expanded the case study design to investigate other settings and participants. Some have studied prewriting

activities, drafting, revising, and editing, while others have observed teacher influences, peer interactions, sense of audience, or combinations of the various aspects that influence the writing process (Calkins, 1980, 1983; Dyson, 1982; Florio, 1980; Florio & Clark, 1982; Graves, 1982, 1984; Kantor, Kirby & Goetz, 1981; McCully, 1982; Moss, 1983; Sowers, 1979).

Concurrent with the interest in children's writing process development is the exploration in the field of semiotics. The study of signs and sign systems is not new but it has not been applied to educational research in a consistent manner. Semiotics is a way of analyzing how meaning is conveyed. The term, "transmediation" was used by Suhor (1982) to describe the process that occurs when students interpret and express meaning in alternative forms. For example, writing may be used to express the meaning of an illustration, retell a story, or respond to music. Writing is the major mode in the transmediation of oral language to representative print.

How is text constructed within the social structure of a kindergarten classroom? The area of semiotics allows ways of analyzing the transactional experience of meaning representation. Children interpret sign potentials in various ways. The study of how meaning is conveyed must go beyond the analysis of writing samples to the in-depth observation of what is happening before, during, and after the writing events. In order to understand the interpretations of the available signs, we must include the larger context that involves the teacher's beliefs about instruction and the influence of the parents on the child's interpretations of what writing is and what it can do. The necessity of studying writing as it happens affirms the use of naturalistic methodology.

#### Purpose of the Study

The purpose of this study was to describe the signs or influences that affected the literacy learning transactions in a kindergarten classroom.

Since literacy is dependent on both the receptive and expressive dimensions of language, the purpose included identification of the reception of potential meaning through available signs and the expression of that actualized meaning in the written mode. The examination of the field, tenor, and mode in the classroom assisted in the determination of the relative strength or weakness of the meaning potential of particular signs.

### Research Questions

The research questions provided the framework for organizing the study in three phases for data collection and analyses: writing performances, context signs, and sign interpretations. (Expansion of questions are in Table 1.)

1. Are there observable differences in children's writing performances according to developmental progressions, sex, and free choice topics?
2. What contextual signs are available and utilized by the children in the process of producing written communication?
3. How do children, their parents, and the teacher interpret writing as it relates to form, function, and process?

### Research Procedures

The research procedures were planned to correspond to the three dimensions of the study. The first phase examined the writing samples of the whole class; the second described the social and situational contexts that influenced the process of producing print. The last section was designed to provide data for interpreting the individual perceptions related to the learning transactions. The preliminary procedures included classroom selection, teacher involvement, research assistance, classroom orientation, and participants.

The selected classroom was a public school kindergarten located near a large university in a Midwestern community. The school served a varied population and was identified by school officials as being representative of various social, economic, educational, and ethnic groups.

Table 1

Research Questions and Data Sources

Questions	Sources
<u>Writing Performances</u>	
1. Are there developmental progressions in the writing samples of kindergarten children?	Collect 9 <u>writing samples</u> from each child in the class after they have participated in the writing station activity.
2. Are there observable sex differences in the writing samples of kindergarten children?	Collect 12 <u>writing samples</u> from each child to analyze surface features of print.
3. Are there observable differences in the writing samples when the subject is assigned by the teacher or selected by the children?	Introduce <u>journals</u> as free-choice writing activity.
<u>Context Signs</u>	
1. What are the signs that are available in the classroom setting to construct meaningful print?	Take photographs of the <u>class</u> arrangement. Record <u>observations</u> in research notebook. Obtain <u>class schedule</u> . Use <u>Loughlin-Cole Survey of Displayed Literacy</u> . Use <u>audio recording</u> for classroom data checks.
2. What signs are utilized by selected children in the process of constructing meaning through print?	Use <u>Child Observation Form</u> during the <u>writing activity</u> . Use <u>audio recording</u> for data checks.
3. What signs and sign progressions are observable in the writing products of selected children?	Select 5 <u>writing samples</u> from the 12 previously collected.

Table 1 (continued)

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Questions	Sources
<u>Sign Interpretations</u>	
1. How do children interpret writing as it relates to form, function, and process?	<u>Conduct Burke writing interview, Preschool children's concept of writing, and Child interview.</u>
2. How do parents interpret writing as it relates to form, function, and process?	<u>Conduct Parent conceptions of writing development.</u>
3. Are there differences in the concept of "good writing" when samples produced by the children are ranked by the children, their parents, and the teacher?	Show 12 randomly arranged <u>writing samples</u> to children, parents, and teacher. Ask what they think is best, and why.

The kindergarten teacher volunteered to be a part of the research team and took responsibility for maintaining the writing folders by collecting, and organizing the writing samples. She also agreed to keep a research journal for recording her observations, questions, and concerns. Weekly conferencing sessions continued throughout the project for ongoing collaboration. During these conferences, the teacher and I did periodic data checks to compare perceptions.

Other research assistants included three part time teachers. One was a parent who aided on a regular basis in the selected classroom. Her involvement included keeping a research journal of observations and assisting in the specific observational data collection regarding the writing process. The parent aide was well acquainted with the children and the classroom routines. The second research assistant was the director of a preschool and taught in the afternoons. The third was a teacher of children in a special education setting. All were experienced observers and were instructed in the specific requirements for this project. Observation notes were compared for confirmability checks along with transcription of the audio tapes.

There were 24 children (13 boys and 11 girls) when the study began in January and 23 when it was completed in May. During those five months, there were several changes, so the core group that remained constant consisted of 18 children (9 boys and 9 girls). Writing samples were collected from all the children throughout the project. For Phase II of the study, five children were selected that most nearly represented the developmental progressions identified by Ferreiro and Teberosky (1982). Appendix A describes the levels and identifies the representative children.

The parents of the five children were asked to assist by sharing ideas and background information related to their children's involvement with print.

### Data Collection Schedule

At the beginning of the second semester, I visited the kindergarten classroom two days per week. After the preliminary procedures were completed, these weekly visits increased to three days and during the last part of the year, daily visits were made. During January, February, and March the teacher collected writing samples from all the children and placed them in folders by names and dates. These samples were analyzed for representative examples of writing progressions. Classroom observations were officially recorded on 12 different days during the project. In addition to the audio tapes, the research assistants and I recorded observations in our research notes. A schedule of activities appears in Table 2.

A variety of interviews, surveys, and observation forms were used to organize the data collection and analyses. The children responded to three different interviews that reflected their perceptions and interpretations about writing. The parents and the teacher responded to similar interviews that interpreted their perceptions of the children's experiences. The surveys focused on the displayed literacy in the classroom and the observation forms were used to record individual behaviors before, during, and after the writing events.

Since the research orientation was naturalistic inquiry, the following guidelines were implemented: There was minimal control of events by the research team--the teacher was in control of the classroom activities and materials; multiple observations were conducted by both inside and outside observers, in order to confirm descriptive data; multiple data sources included photographs, audio recordings, research observation notes, interviews, and children's writing samples; reflective interpretations by the participants were obtained through the teacher's journal and the children's interviews.

Table 2

Schedule of Research Activities

Activities	Time	Purpose
Classroom Observations	1/15-5/25	To determine the available signs + observe the arrangement of materials; + note time allotment for literacy events + study teacher's instructional stance + observe role relationships
Writing activities (collect samples)	2/01/3/02	To provide data for identification of developmental progressions
	3/07-5/25	To compare writing products of boys and girls
Journals	3/27-5/25	To compare free choice writing with assigned classroom writing
Writing observations	4/02-5/25	To observe the writing process for behaviours relating to sign utilization (resource use, time use, involvement with others)
Interviews	4/11-5/25	To provide data for sign interpretations
a. Child		To determine children's perceptions of form, function, and process of writing
b. Parent	5/02-5/25	To elicit parents' perceptions of the form, function, and process of writing
c. Rating of writing	5/24-5/29	To determine the children's, parent's, and teacher's criteria for judging "good writing"

## Results

Phase I of the study focused on differences in developmental progressions, differences between boys and girls, and differences between assigned classroom writing and self-selected journal writing. A summary of the results include:

1. Developmental progressions. The findings concerning writing performance revealed a representative range of children in each of the five categories, as determined by Ferreiro and Teberosky's (1983) levels. It was difficult to assign the children to specific levels because many of them appeared to be in stages of transition. Random scribbles and organized letter forms were found in the same writing sample. The most helpful insight from this exercise was a realization that categorizing children is difficult, and possibly inaccurate. Graves (1984) reflected this realization and suggested that while there were developmental factors in children's growth as writers, it would be more helpful to ignore fixed classifications and consider the writing process as a constantly changing phenomenon.

2. Differences between boys and girls writing samples. There were some observed differences in the surface features of print when boys' and girls' writing samples were compared. The girls produced more standard forms than the boys when separate graphic units were counted. The boys used more words with conventional spellings, included more punctuation marks, and made more text changes than the girls. This section of the analysis added further caution in reporting such results, primarily because of the small sample, but I was impressed by the fact that the individual productions of one or two children could affect the totals so dramatically. Statistics in a study of this type can identify trends but must be carefully interpreted. Table 3 summarized this data.

3. Differences in assigned and self-selected writing. The primary

Table 3

Classroom Writing Samples by Categories

Categories	Boys N=9	Girls N=9	Total N=18
Number of collected samples	45	45	90
Separate graphic units	1162	1399	2561*
Nonstandard forms	130	29	159
scribbles	50	13	63
letter-like	80	16	96
Standard forms	1032	1370	2402*
upper case letters	647	605	1252
lower case letters	381	720	1101
numerals	4	45	49
Words	241	239	480*
Functional spelling	87	95	182
Conventional spelling	124	81	205
Copied Words	30	63	93
Punctuation marks	45**	7**	52
Text changes	110	75	185*
Erasures	58	36	94
Mark overs	45	37	82
Insertions	7	2	9
Illustrations included	44	44	88
Related text	36	36	72

\* The category totals appear before the subcategory results are reported.

\*\* One boy used quotation marks 23 times in one writing sample. Two boys produced 40 of the 45 punctuation marks, and two girls produced all of the girls'.

differences noted in assigned classroom writing and free-choice writing were related to the time allowed, the attention given, and the materials provided. The most interesting observation regarding the journal entries was that a majority of the children wrote first and then drew an accompanying picture.

Phase II involved the study of the social and situational contexts that provided the foundation for literacy activities. A description of the learning environment was accomplished through classroom observations, audio tapes, interviews, and filed notes. Incorporating Halliday's (1978) ideas concerning the importance of field, tenor, and mode in language production, this portion of the study identified major signs that were available to children. Those signs were: (a) a classroom arrangement that invited learning; (b) a schedule that allowed time for reading, writing, listening, and talking; (c) a teacher whose expectations encouraged a sense of community, where learning was a cooperative venture; and (d) a wealth of literacy materials to assist in the learning process. A detailed description of these signs is found in Crenshaw (1985).

To investigate the signs utilized by the children, an observation coding form adapted from Graves (1973) was used to note behaviors during the process of writing. This process encompasses prewriting (positioning paper, sharpening pencils, arranging crayons, watching and talking to others, and drawing a picture), writing (vocalizing and subvocalizing sounds, peer talking, use of resources, reading own text, editing or changing text, and requests for help), and postwriting behaviors (sharing their work with one of the three adults or with a peer). The children's explanations of their writing was recorded and compared with the field notes.

The specific focus on the writing processes of the five representative children revealed that peer involvement was the sign most utilized. Conversation either moved the writing along or slowed it down. The classroom facilities

were strong signs that influenced the specific behaviors. The arrangement of the tables encouraged talking and sharing work; the availability of particular writing materials and instruments influenced the sequencing of the process. The paper was a sign that the picture should be done first and the writing next. The teacher's involvement indirectly influenced the children to monitor themselves and directly encouraged a sense of an appreciative audience. The displayed print in the room guided the children in making the forms of the letters and combining the letters in proper sequence to produce words.

The five children that were observed in the process of writing revealed differences in interests, time usages, sociability, and writing experience, but they shared a common quality; they viewed themselves as communicators and they expected their text to say something. When asked to share their work during the postwriting phase, all of them "read" what they had written. This kind of perception reflected an encouraging social environment that offered potential signs for meaning.

The writing products of the selected children were analyzed to note signs and sign progressions over a period of time. The categories for analysis were: use of illustrations, graphic forms, text changes, and resource usage. It was necessary to choose specific days to analyze the writing samples because the children did some writing every day. To broaden the range of topics, five classroom writing assignments and one journal entry were selected to represent writing opportunities related to different content areas.

Table 4

Writing Samples by Topic and Content Area

Date	Topic	Content Area
2-1	Ground Hog and/or Flag	Language Arts
3-9	Space Travel	Social Studies
4-15	Robot Walk	Math
5-7	The Little Chicken	Science
5-15	Free Choice	Journal
5-23	Noah's Ark	Literature

In reviewing the selected writing samples for signs of developmental progressions, I noted the following trends for each child:

Richard. In the selected time span, Richard's use of illustrations became more representational in relating to the assigned topics. His text developed from a random arrangement of nonstandard forms to a functional connection of beginning sounds with symbols. He utilized the potential signs available in peer involvement through conversation and viewing their work as a resource of immediate displayed print.

Marianne. Marianne focused on her talent in drawing to express meaning. She appeared less confident of her writing and was reluctant to create text. Her major progression was characterized by a move from safe copying of standard print toward experimentation with letters and sounds. She depended less on outside resources and began to trust herself.

Carrie. Carrie's illustrations were consistently appropriate and very well done. The range of sign progression in text ranged from representing beginning sounds to the creation of "readable" text. She exhibited close sound and graphic similarity to conventional print, and utilized the available resources around her. Carrie appeared to develop a sense of authorship by creating a variation of a story.

Erik. Although Erik's illustrations were not a priority, he did include more detail as time progressed. His most noticeable signs of text progression involved the shift from first draft writing to the use of conventional spacing in order to assist the reader. The changes in text indicated attempts at revision. Erik appeared to have developed a sense of audience.

Jeffrey. Jeffrey's illustrations reflected the addition of more details and the increased use of color as time passed. The first picture was done in pencil with no color added; the last ones included many colors. Jeffrey moved

toward becoming more of a risk-taker with print as he became more confident in creating text. His use of punctuation indicated his awareness of available resources. Samples for the individual children are in Appendix B.

Phase III involved the various interpretations of children, their parents, and the teacher with regard to the form, function, and purpose of writing. Three interviews with the children elicited responses concerning writing and drawing distinctions, characteristics of good writing, purposes of writing, and the process of writing.

In responding to writing and drawing distinctions, all five children identified differences and gave reasons such as, "Drawing pictures isn't letters and letters aren't pictures."

When the children were asked to identify a good writer, four out of the five named the same person. The reasons given centered on two qualities. The good writer was attentive and followed directions. All the children said that their parents thought they were good writers.

The responses on the purpose of writing focused on the concept that older people already know how to use writing for many reasons. The children's reasons for writing centered on the need to acquire knowledge to learn more.

Questions about the process indicated that the children think first before they write. Their perception of school writing included the process of illustrating an idea before writing about it. Thinking about the message was continued throughout the writing event.

The parents had differing views concerning the characteristics of early writing. Richard's, Marianne's, and Jeffrey's parents emphasized learning the letters to put together for words; Carrie's and Erik's parents stressed the importance of expressing meaning and encouraging the desire to write.

Responses were varied when the children, teacher and parents were interviewed about rating the "best" writing. The children rated pictures, print,

and the text readability. Carrie and Erik were the only ones who mentioned the satisfaction that resulted from creating text. The parents indicated an emphasis on the function and process when commenting on their children's work. Some of them had previously stated that form was the most important criterion for early writing. The teacher judged good writing on the basis of the children's progress in expressing meaning through taking risks.

### Discussion

In reviewing all the data, it was possible to follow an audit trail that produced strong impressions, or signs, that could be utilized for interpreting the abundance of data. Those signs were translated into theoretical memos which provided the foundation for this section of research report. In Deely's (1983) description of semiosis, he referred to Peirce's triadic components of Firstness, Secondness, and Thirdness as: Sensation, perception, and understanding (pp. 94-103). There were numerous triadic events in the data analysis process that resulted in notations for further consideration. From sixteen major impressions that were noted, I synthesized the ideas into seven theoretical memos that provide the framework for the discussion, the implications, and the recommendations.

Memo 1: The social context provides a variety of signs for learning transactions. A description of the social setting is essential in understanding and interpreting the findings of this research project. All learning occurs within a social environment and the signs within that environment may inhibit or encourage the process. The description of the social context in this study included observing the classroom arrangement, the schedule, the teacher, the children, and the resources. It became evident that there were signs and sign-givers; objects were signs and people were sign-givers.

The classroom arrangement was a sign that ideas and materials were to be shared. The invitation to talk was encouraged by the arrangement of the tables and chairs. Children could see and hear everyone at their table. The open shelves with labeled containers provided choices for free time activities. Children negotiated with one another for particular materials. The classroom arrangement encouraged the development of socialization strategies.

The classroom schedule reflected the importance of literacy activities. At least an hour every day was planned for language enrichment through talking, writing, sharing books, viewing filmstrips, and listening to records. The schedule was arranged to focus on functional literacy by integrating content areas with the above activities.

The availability of literacy resources was an encouraging sign. The children had access to the library every morning. Books were casually arranged in various areas around the classroom rather than being confined to shelves in neat rows. An open book sitting in the chalkboard tray was an invitation to children for immediate enjoyment. The chalkboard was used as a source for displayed print. Children were invited to communicate messages. All the storage areas that contained children's belongings were labeled as were other classroom materials and furnishings. The bulletin boards displayed children's work with captions for identifying the subjects or themes. Notes and memos were taped to the classroom door as reminders to both children and teacher that something important needed attention. Nearly all displayed print was at children's eye level. This was a sign that the child was considered an important receiver of classroom communication. Classroom arrangement, schedule, and materials were considered to be the available signs that were dependent on the primary sign-giver--the teacher.

Memo 2: The teacher is an important sign-giver. The teacher in this study had an understanding of children's individuality and used that knowledge to evaluate the kindergarten program and the process of instruction. She believed that children were good teachers and encouraged them to respect and assist each other. The children were invited to assist her in the instructional activities. She was interested in the possibilities of early writing to encourage literacy and tried different assignments to formulate some perspectives for better understanding. Her journal entries reflected the following observations:

"There seems to be a direct relationship between success in writing... and children's desire to write."

"Children like to write about real life situations."

"Children write when it's part of a natural event or the result of a game."

"Daily station writing is very successful."

"Little things can interfere in the writing process."

This teacher tried to vary the writing assignments by asking the children to write their stories first, as real authors do, and then illustrate them. This seemed to encourage the production of the message through print. She also tried a strategy of assisted writing with those children who wouldn't take chances with functional print. After she talked to them about what they wanted to say, she would suggest they write the first word, then she would write the second. By taking turns the children were encouraged to produce a text in collaboration with the teacher. The teacher's instructional stance encouraged the proliferation of signs.

Memo 3: The parents communicate signs that influence the school performance. The social context must include parents as sign-givers. Children do not ignore their parents' ideas and expectations when they go to school. In this study

the parents expressed ideas about writing that were reflected in the responses of the children. Richard indicated the purpose of writing was to learn how to write his name. His mother reported that his only writing experience at home was when she guided his hand to make his name. Marianne's mother, who was a teacher, perceived writing as a part of learning. Marianne reported that the purpose of writing was to learn more. Jeffrey's home experience in reading related to his writing performance. He was learning to read patterned texts and his writing reflected that style. Erik and Carrie had similar home experiences; their parents wrote with them, encouraged risk-taking in expressing meaning, and accepted nonconventional forms as meaningful text. Parents are sign-givers when they react to children's school work at home.

Memo 4: A situational context guides the form, function, and process of communication. The situational context, as suggested by Halliday (1978), includes the field, tenor, and mode that are present in a given situation. In a classroom situation the field is the nature of the activity being presented, and what is happening at the time. The writing events for kindergarten children may be different each time. They may vary in the way the subject is introduced, in the content area presented, or in the type of resources used. The tenor of a writing event is dependent on role relationships. The teacher's relationship to the child and the relationship among children sitting at the table affect the child's performance. The mode deals with the means of representation, or the channel of communication. In the case of kindergarten children either the picture, the text, or both, may convey meaning. The decision may be influenced by the sense of audience. Who will see their work? Does someone care about what they do or how they do it? These concerns may affect modes of communication.

Memo 5: All contextual signs are not equal. The classroom arrangement and facilities provided a strong sign for encouraging language use. The fact

that children were talking and writing side-by-side provided a resource of oral language and an in-process display of print. Children could see the writing as it happened.

The writing paper may have been an inhibiting sign. It affected the ease and perhaps the volume of writing. The fact that it was designed for the picture first and the writing last influenced the children's attention and time use. Drawing pictures was easier because there were no lines to worry about. On the other hand, trying to position letters between one inch lines was difficult for many five-year-olds. It takes considerable concentration to remember where to start, where to stop, and which way to go with the pencil.

Time, or the lack of it, was a sign. Some of the writing samples stopped in mid sentence. The children often mentioned, while sharing their work, that they didn't have time to finish what they wanted to say. One child asked to continue his story the next day. He wrote while the other children had free choice game time. After 35 minutes, he completed two full pages and wrote HAP R 3. When he read his story to me, he asked me if I know what he wrote at the end. I suggested he tell me and he replied, "That's chapter 3--I'm going to write the rest of it at home."

It is significant that kindergarten children will sit still for 40-50 minutes engaged in a communication activity. There was no evidence of short attention spans during the writing time. When children are engaged in meaningful activities that are intrinsically motivating, learning seems to occur naturally and easily. Producing one's own pictures and texts must be more important than cutting, marking, and pasting, someone else's unfamiliar ones.

Memo 6: Children serve as resources. In this classroom, peer involvement was one of the strongest signs utilized by the children. They shared their ideas, their interests, and their materials. In group time, the children were

encouraged to help each other by asking questions, giving hints, and making supportive comments. The teacher mentioned the influence of peers in her journal reflections: "Children who are showing an interest in writing but don't have the code figured out ask others how to spell even though they don't know the letter names." Mutual assistance was a great expectation in this setting.

An unexpected insight concerning resources was that children depended on themselves, as well as their peers. They used their background knowledge and their sense of authorship to create messages for sharing with others.

Memo 7: Children are capable interpreters as sign receivers and sign givers. The children determined what signs they would receive and use. The study of semiotics can be related to the children's production of written symbols to express meaning. In reviewing the concepts of Firstness, Secondness, and Thirdness, one may begin to understand the relationship. Firstness is the awareness of the sign; Secondness is the interpretation of the sign; and then Thirdness is the application of the sign. Deely's (1982) idea of semiosis, or the act of cognition, included sensation, synthesis, and application. In Neisser's (1976) view of cognition, children construct knowledge through mediating inner experience with outer information. Other have suggested that there must be a will or intent involved in the act of communication. A sign is only a signal when intent is not the guiding force. Semiosis is difficult, and the intention to communicate is thwarted when the sign-giver and the sign-receiver do not share the same code.

When children merely react to assignments without understanding or thinking about their purpose, or meaning, they are experiencing dyadic events which are variations of conditioned responses. Semiosis involves triadic behaviors which depend on creative thinking. Children need to form hypotheses and accept

or reject sensations. The understanding of the sign is an act of transmediation. Smith, Goodman and Meredith (1976) suggested a model of learning that combined language and thinking which is appropriate for any learning situation. They proposed that the learning process must include the combined actions of perceiving, ideating, and presenting. It is not enough to perceive the sign; a child must think about it, try it out, and then be able to share it with someone else. When meaning has been received and given to others--cognition has been shared. Children are valuable resources in a classroom when they are allowed to both receive and give meaning.

### Research Implications

The theoretical memos provided the foundation for numerous research possibilities. A few of these are:

1. A longitudinal study would provide a better view of children's growth as language users. Maintaining collaborative research teams that include parents and teachers could assist in refining the interpretations of data.

2. This study was a beginning project in applying semiotic analysis to educational research. The combination appears to be compatible and further research is needed to explore the possibilities.

3. The importance of situational context needs further investigation. This implication is a result of the interview experiences and general observations. Field, tenor, and mode must be described in order to understand and interpret data. The rationale for context-stripping in experimental research design is to avoid the influence of situational context. Perhaps it is time for some comparisons between differing research models.

4. The importance of peer involvement in the learning experiences of kindergarten children needs more attention. A study that combines interactional analysis with children's interpretations of the field, tenor, and mode could have important implications for classroom practice.

### Classroom Recommendations

In reviewing the implications for future research, the following classroom recommendations are suggested:

1. Encourage teachers to become researchers in their own classrooms. Keeping a research journal is a way of evaluating classroom activities for more efficient planning. Teachers may share their experiential findings to parents, other teachers, administrators, and educational researchers.
2. From the interview data, parent's ideas are integral to the school experience. We should enlist parents as partners in the instructional program of the school by providing mini-workshops, special events, or collaborative planning sessions to integrate the instructional focus for literacy learning.
3. The responses regarding children's experiences with writing suggested that writing should be an integral part of the curriculum. It should be a part of content area studies and have functional purposes in the classroom. A writing center should be stocked with a variety of materials, especially plain paper for young writers. A chalkboard is a good resource for experimenting with print. A typewriter or a computer would be welcome additions, too. A full list of implications and recommendations are found in Crenshaw (1985).

### Conclusion

In this study, the findings indicated that children are semioticians when they experience the reception and expression of signs in the social context of a classroom. Educational semiotics provides a potential for research and theory development that is ready to be explored. As educators, we must share theoretical memos, with other thinkers in order to refine our educational objectives. It is difficult to view the whole picture and the various details at the same time. The integration of theory and practice may require an adjustment in perspectives. Our focus is properly aligned when it centers on the child as informant.

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Appendix A

Developmental Progression Levels

## APPENDIX A

### Developmental Progression Levels (Ferreiro and Teberosky, 1982)

Level 1. The child produces nonconventional graphic forms that are typically composed of curved or straight lines.

The forms may be similar to alphabetic characters:

5 J P O S U W S E (Richard)

Level 2. The graphic forms produced by the child become more defined and similar to conventional letter forms:

M l e n n e . u w e e w (Marianne)

Level 3. Children attempt to assign a sound value to the letters so that writing represents the sound segments of speech. This level indicates an awareness of the syllabic hypothesis in which one letter stands for a syllable:

T H e C S Y N T H e R (Carrie)

Level 4. Children show an awareness that letters have individual sounds that can be strung together to represent the visual image of a word. This is the alphabetic hypothesis. At this level, children combine their syllabic and alphabetic hypotheses:

9 L P K E E T E N I G (Erik)

Level 5. At this level, children understand that each written character corresponds to a sound value smaller than a syllable, and they systematically analyze the phonemes of the words they are writing. Standard orthography is noted in writing samples.

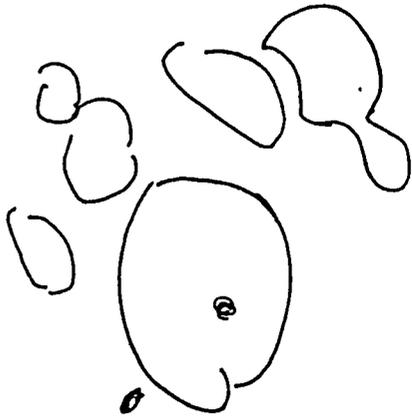
I I I K E M O M M Y . (Jeffrey)

Appendix B

The First and Last Writing Samples of Five Selected Children: Richard,  
Marianne, Carrie, Erik, and Jeffrey (2-1 and 5-23 Samples)

RICHARD

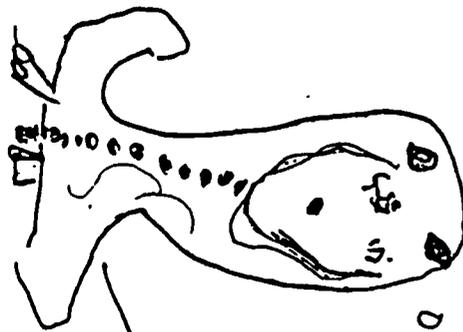
RIC



2-1 Topic: Ground Hog

Text: RIC (part of name)

5-23 Topic: Noah's Ark  
Text: Noah is smiling  
because the animals are gone.



honk  
Sneak  
pop  
CROAK  
BEE

MARIANNE

Marienne  
Hooray for our  
Flag

2-1 Topic: Ground Hog or Flag

Text: Hooray for our flag  
(copied from board)



5-23 Topic: Noah's Ark

Text: Butterfly is flying  
and the rainbow is shining.



AEMOB  
ZKBOLOO  
BOTH FLY IS FLY  
ehg ddti  
re n e K O B O  
WIS  
Sahng  
Marianne

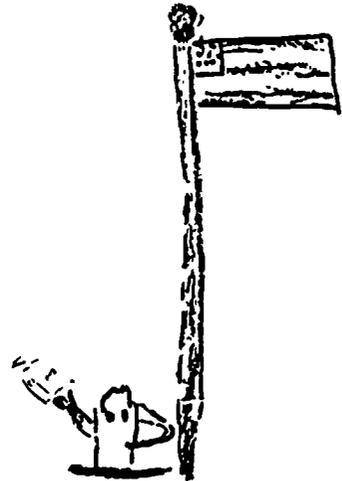
5-23

CARRIE

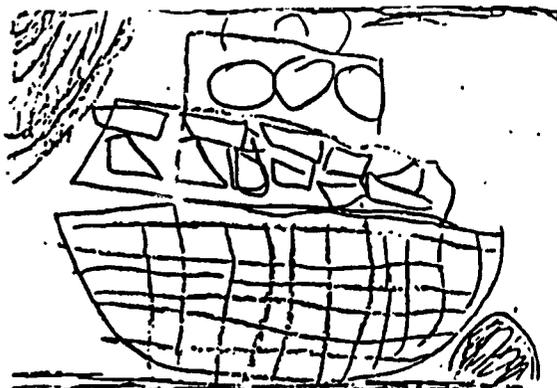
2-1 Topic Ground Hog or Flag

Text: A ground hog is saying  
Hi to the flag.

A Gbbice 2#li>N 2rf HI To Toe flol



2-1



THE OSCRIS VVSS  
STOP BOY A BIK TWS  
N THE MADORR AVV  
TOE O UVQPR

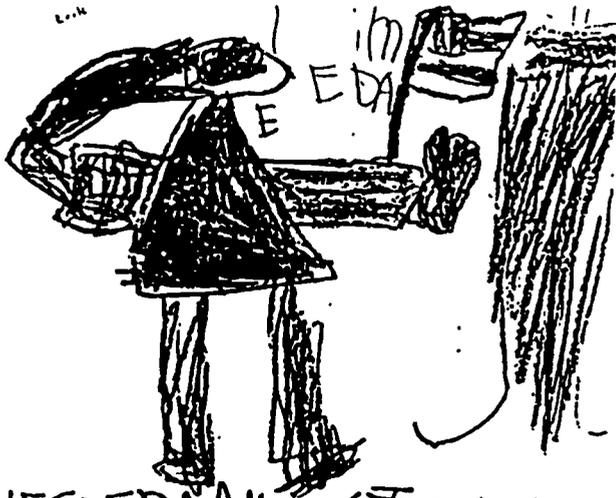
5-23 Topic: Noah's Ark

Text: The Ozark (Noah's Ark)  
was stopped by a big rock  
that was in the middle of  
the ocean.

carrie

5-23

ERIC



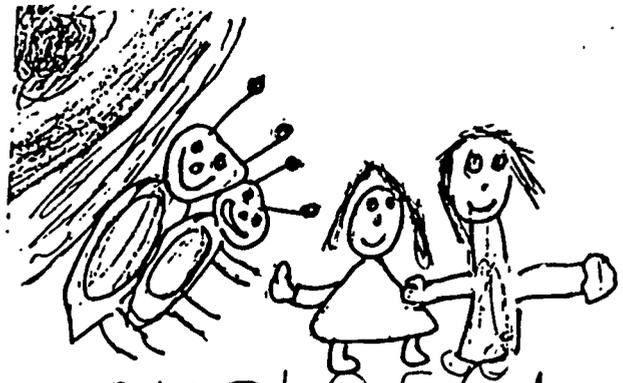
2-1 Topic: Ground Hog or Flag

Text: Once upon a time there was a day and it was about my valentine.

WES EPANENT AR WES  
EADENT WES EBN PIE  
STM

5-23 Topic Noah's Ark

Text: All the animals were gone except the bees.



ERIK BLESS MAN  
A THE THE  
ANA MUDIS  
WIF GON ISPT  
THE BEES

JEFFREY

+ H E F I O E . M O M M Y . G O  
F I O E M O M G O G O  
G O G O T A R  
ground H R Q



2-1 Topic: Ground Hog or Flag

Text: The flag. Mommy. Go  
flag Mom Go Go Go Go The  
(ground) Hog

5-23 Topic: Noah's Ark

Text: The rainbow is  
happy, yes the rainbow  
is happy. I love Mo,  
yes I love Mo. I love  
you, too. Yes, I love  
you too.



The "RAMBODIS" HAPPY  
+ The "RAMBOO" IS HA  
PPY " I I V " M O "  
Ye S " I I V " M O "  
I I V " Y O U " T O "  
Ye S " I I V " Y O U " T O "

5-23