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AN INVESTIGATION INTO THE PRACTICAL APPLICATIONS OF PSYCHOLINGUISTIC THEORY

THESIS

Submitted to the Graduate Committee of the
Department of Curriculum and Instruction
Faculty of Education
State University College at Brockport
in Partial Fulfullment of the
Requirements for the Degree of
Master of Science in Education

by
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Abstract

The purpose of this study was to explore the practical applications of psycholinguistic theory. Meaning-emphasis programs are not widely used in schools and are difficult to quantify. A case study format was designed to examine the effectiveness of this approach through in-depth observation.

Data was compiled in the form of antecdotal records and student notebooks. Diagnostic tests developed by Clay (1979b) were also used as measures of growth. Materials and procedures were described in terms of their psycholinguistic focus.

The student, S , was successful in the program and used meaning as the preferred strategy for word attack. Writing and oral expressive language also improved during the course of this study. Research with larger populations is needed to validate the effectiveness of applications of psycholinguistics to the reading process.

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Chapter I

Introduction

Various theoretical frameworks for reading instruction have been described in the literature, much of it focused on code-emphasis or bottom-up theories. Smith (1979a) accounts for this because of the inherent proclivity of these theories toward quantification. He states that programs designed upon these theories proliferate because they are "conceptually simple and lend themselves easily to measurement, manipulation and control" (Smith, 1979a, p. 36).

While the psycholinguistic theory of reading, with its emphasis on meaning, has been the subject of much research, it does not lend itself to quantification. It is more amenable to observation (Clay, 1979b; Goodman & Goodman, 1979 and Smith, 1979a). Because the integrity of a theory of reading is, in part, determined by its ability to provide applicable understanding of the reading process, an understanding of how and why children learn to read may be facilitated through observation rather than through "rigorous experimentation under controlled laboratory conditions" (Smith, 1979a, p. 40).

Whereas Smith (1979a) concedes that children learn to read with virtually any method of instruction, a theoretical foundation in understanding the process of reading is likely to enable teachers to select and use the wide variety of existing materials to a greater potential. The educator does not need to engage in trial-and-error instruction, but can operate from a theoretical frame of reference. The guiding principles are a basis for understanding the process and using the techniques consistently and effectively. Coladarci and Getzels (1955) state that the relationship between theory and application must be explored in order to make effective choices in educational practice.

Purpose

The purpose of this study was to investigate applications of psycholinguistic theory through the observation of reading strategies during an instructional program based upon psycholinguistic principles. A case study format was chosen over a group study so that observations could be recorded and described in greater detail. In support of the case study design, Stake (1978) states that "everyday perspective will be superior [to empirical research] for discussion among scholars" (p. 6). Rather than making a case for generalization, it is the goal of this critical examination of psycholinguistics to

gather observations and insight regarding the particulars of its application.

Review of the Literature

Although Horace Mann suggested the importance of meaning in education as early as the nineteenth century, most reading instruction consisted of little more than learning the sounds of the alphabet or engaging in the "look-say" method of reading well into the twentieth century. Neither of these instructional methods placed a premium on meaning.

According to Smith (1973) the link between psychologists and linguists was established in the 1950's when much research centered on language acquisition and speech production. The cognitive strand of psycholinguistics developed mainly from the influence of tansformational grammar as described by Noam Chomsky. The notion that surface structure (physical representation of language) was distinct from deep structure (meaning of language) caused psychologists and linguists to examine "how the information that sentences contain is expressed, stored and comprehended" (Smith, 1973, p. 4).

Goodman applied the study of psycholinguistics to the reading process, defining it as "a process by which the reader (a language user) reconstructs, as best he can, a message which has been encoded by a writer as a

graphic display" (1973b, p. 22). In order to process written expressive language, humans use strategies to sample the language, predict structures, test them against context and confirm or reject information. Goodman describes three cue systems readers use simultaneously and interdependently--graphophonic (cues within words), sytactic (cues within the flow of language), and semantic (cues within the reader)--in sampling and predicting language. Efficient readers develop strategies to use the most productive cue systems.

Smith (1973) discusses the limitations of decoding to sound (phonics) in reading and asserts that meaning is required in order to produce the appropriate sounds of words. The deep structure determines the oral interpretation of the surface structure. The reader uses knowledge of language and experiential background to bring appropriate meaning and intonation to the printed word. This is exemplified in the reader's ability to assign the correct pronunciation to homophones such as _read_ or _dove_. These words must be used in context to be decoded properly. The intended stress and pronunciation of a passage can only be "decoded" if it is comprehended.

Phonic rules, with their concomitant exceptions, are not efficient for word attack outside of the controlled vocabulary which accompanies programs based on code-emphasis theories. It is not unusual to have succeeded in a synthetic

phonics program and become an excellent "decoder" (oral reading), only to discover a serious deficiency in comprehension. It is akin to pronouncing the words of a foreign language by mastering pronunciation, but not knowing what any of the words mean. A major distinction between print and speech is that words which have the same oral surface structure (sound) are spelled according to a morphological basis, thus negating the need to ever decode to sound for understanding. Goodman (1968) and Smith (1979b) contend that making sense of written language as a means of communication is the goal for beginning reading instruction and emphasis on phonics destroys the gestalt of language.

Psycholinguistic theory has not received support in much of the literature nor have its applications been widely used in schools. In a revised edition edition of Learning to Read: The Great Debate, Chall (1983) retains the stance of the 1967 "classic" of the same title: code-emphasis approaches to beginning reading instruction produced children who yielded better standardized test scores than did children in meaning-emphasis approaches. She compiled the data from several studies which compared the effectiveness of code-emphasis programs with meaning-emphasis approaches, concluding that code-emphasis programs were superior and that synthetic phonics was the best method within this

framework. Chall cited the increased use of phonics in educational television programming, such as Sesame Street and The Electric Company and in widely used reading programs as evidence of support for these findings. The recent publication of Rudolph Flesch's Why Johnny Still Can't Read (1981), which makes the claim that not enough synthetic phonics programs are being implemented, is also cited by Chall as a testimony to her previous conclusions. It must be noted that the programs referred to as meaning-emphasis were, in fact, sight-word methods. These sight-word methods may be different from strictly code-emphasis approaches, but are not based on psycholinguistic theory and cannot be considered meaning-emphasis. For this reason, proponents of psycholinguistics persist in their theoretical convictions.

Goodman and Goodman (1979) affirm their position that learning to read is a natural process that begins "when children respond to meaningful printed symbols in a situational context with which they are familiar" (p. 144). The awareness of print as functional language is of great importance as reported by Clay (1979a), Goodman and Goodman (1979), Holdaway (1984) and Smith (1973).

The movement toward natural literacy, supported by psycholinguistic theory, embraces a holistic perspective of language wherein reading and writing are integrated

with listening and speaking. The relationship between language and learning demands active participation in meaningful language experiences. Chomsky (1971), Clay (1979b), Graves (1983) and Holdaway (1980) point to the benefits of having children discover the relationship between print and speech by early writing experiences during beginning reading instruction.

Ashton-Warner (1963) used creative teaching strategies to build upon and enrich the mutual development of children's language in a school with a high minority enrollment in New Zealand. In _Teacher_ (1963), Ashton-Warner recounts the methods she used in developing literacy including "organic writing," "organic reading" and the incorporation of meaningful events from their lives into class work. The linguistic aspect of play and conversation was an essential part of the curriculum. These practical, but innovative, methods of instruction quickly gained the attention of the British and the Australians.

Clay (1979a) and Holdaway (1979) both credit Ashton-Warner, Goodman, and Smith with theoretical principles upon which language instruction should be based. Halliday (1978) described _Breakthrough to Literacy_ (Mackay, Thompson and Schaub, 1978) as a program which "demonstrated very clearly the value of our continued insistence on seeing reading

and writing in the broader context of the learning of language as a whole" (p. 206). Clay (1979b) developed a "Reading Recovery Programme" which combines writing and reading activities with what the child already knows about language to develop literacy. Holdaway (1984) advocates similar holistic language instruction, supporting the psycholinguistic tenet of reading for meaning. These instructional programs capitalize on the children's knowledge, experience and language to involve them in literacy events as they participate through sharing, listening, manipulating language, writing and reading.

Summary

In this chapter, the need for a descriptive study of psycholinguistics has been established. The case study format was discussed as the optimal way to observe the effects of instruction based on psycholinguistic theory. Although the meaning-emphasis approach is difficult to quantify and has not been supported in much of the literature, studies such as this are needed to provide further insight into the reading process.

Developmental or holistic instruction which involves integrating the language arts so that children learn strategies to deal with language to meet their needs is supported by psycholinguistic theory. The emphasis in developmental learning, as in the psycholinguistic application to reading, is on meaning.

Chapter II

Procedures

In this section, the design of the instructional program and the materials used will be described in terms of psycholinguistic theory. The subject and family component are included in this discussion.

Subject and Duration

A six-year-old girl, Sc , from the inner-city was selected to participate in the investigation after being identified by her teacher as a non-reader in the second year of formal instruction in a synthetic phonics reading program. THe student had been placed in a modified first grade (small class size) due to lack of progress in the Open Court Foundations Program in kindergarten. During a parent interview, the program which makes up this study was described and parent participation was enlisted. The parents were frustrated with their own efforts to help their daughter and were not satisfied with her performance in school.

Forty hour-long sessions were planned during a ten-week period. Two sessions each week were conducted at school, one at the community library and one in the child's home. A visit to the museum and a farm were also included. Sessions in the home were designed to share practical applications

with the parents and to share literacy events in a social context.

During sessions at home, the parents were able to observe the techniques and strategies used with their daughter. Homework was sent home with directions for activities with which parents felt comfortable. These included reading to S , using the Sentence Maker, and cut-up stories. Gradually, the home sessions became a time for total family involvement in literacy events.

Informal Approach to Diagnosis

As stated in the first chapter, the psycholinguistic theory of reading does not lend itself to standard measures or quantification. Diagnostic information is gathered through observations during learning experiences. In this way, the student's strengths are noted and used to develop strategies within the context of a natural learning event. In isolated skills assessment, no provision is made to account for the ability to transfer these skills to reading in context. Informal diagnosis provides insights into the strategies the learner uses and serves as an overall gauge of the development of new strategies. This diagnosis occurs in a meaningful setting wherein skills must be integrated and applied as is the goal of beginning instruction.

The program incorporated the following procedures to provide diagnostic observations:

-Letter Identification, Word Matching, Concepts About Print, Ready to Read Word Test, Test of Writing Vocabulary and writing samples (Clay, 1979b)

-Sentence Maker (Mackay, Thompson & Schaub, 1978)

-Oral retelling of stories, oral and written cloze procedures, original story writing, creating text for wordless books, oral reading, miscue analysis

Data were collected in the form of antecdotal records for each session. In addition, two student notebooks were kept-- one for original writing samples from each session and the other was filled with copying tasks from the Sentence Maker as well as diagnostic teaching activities. Tape recordings were made of most sessions, including the four wordless books for which Schneika composed stories.

Design of Instructional Program

The program was designed with psycholinguistic theory in mind; all literacy events were to be meaningful within a given context. Psycholinguistic rationale for the techniques is based on the development of strategies to recognize and use three cuing systems:

-graphophonic (cues within words [CWW])

-syntactic (cues within the flow of language [CWFL])

-semantic (cues within the reader [CWR])

These cuing systems were to be tapped repeatedly in predicting and confirming or rejecting samples of language. The fundamental goal for all events was to read for meaning.

Description of Materials

The following materials were used with psycholinguistic theory as a base. Both formal and informal materials were adapted for use with S .

Breakthrough to Literacy (Mackay, Thompson & Schaub, 1978) The Sentence Maker is a folder with lines of high frequency words grouped according to function and printed above slots which are designed to hold word cards in place as they are introduced. Students are able to make sentences with these word cards on a stand which is included. There is also a place for storing personal words, chosen by individual students, so that vocabulary is not completely controlled. This allows students to recognize and match words or sentences and facilitates the manipulation of words and punctuation in a standard format. The Sentence Maker was used for cloze procedures and for language lessons (subject-verb agreement, affixes). Also, S would create a sentence and then copy it in a notebook. An additional variation was to dictate a sentence to her and have her use the Sentence Maker to make the sentence. It was especially good to use in composing initial sentences to read and upon which to extend.

The *Breakthrough* books were used as independent reading and as models for writing original books. The books were written to maximize the interaction between common experiential

background and language. Because the books were written in England, some of the language provided material for lessons in comparison and contrast of language which was later extended to comparison and contrast of standard English with the dialect of the student.

Reading books to the student Books with patterns of story, verse and logical structures were identified because of their predictable text (Holdaway, 1979). The student was usually asked to choose among four or five selections so that choice and intention could be exercised. Noyce and Christie (1981) described a strategy for using literature with target patterns to develop children's facility of syntax through the integration of listening, speaking, writing and reading. This technique was adapted for use in the program, an example of holistic language instruction. During these stories, oral cloze procedures were used to encourage the use of prediction in reading and to gauge strategies and comprehension.

Writing Although no commercial materials were used for the writing process, the format for instruction was based on the suggestions of Chomsky (1971), Clay (1979b), Graves (1983) and Holdaway (1984). Writing activities included copying from the Sentence Maker, writing letters and cards, original compositions (invented spelling), and creative

responses to stories. Hoffman and McCully (1984) state that oral language transactions during the writing process enrich the potential for language learning and may enhance children's self-concept as writers.

Print in the environment Signs, games and labels provided natural and functional opportunities for using cue systems in meaningful and contextual situations. Functional awareness of print and its relationship to meaning is considered essential by Clay (1979b), Goodman & Goodman (1979) and Holdaway (1980).

Wordless books As an initial, informal diagnostic activity, a book of photographs (Hoban, 1971) was used in which a succession of three perspectives per item gradually revealed the identity of the item. This was meant to tap experiential and conceptual background as well as to sample expressive language. The student was asked to predict and confirm or reject hypotheses while supplying explanations based on successive visual cues.

Wordless picture books were used at two-week intervals to observe the relationship between oral expressive language in developing a story and instructional experiences. The student looked through the pages with the instructor, then was told to look through the pages again independently to make up a story about the pictures. After this, the

student told the story to the instructor while a tape recording was made. The tape was then played back and disussed.

Sesame Street Magazines Various activities were selected from these magazines to facilitate oral expression, problem solving, concept formation and reading for pleasure.

Cut-up Stories (Clay 1979b) Selections from published and original works were cut for the student to reassemble. This provided practice in word recognition, using cue systems to reconstruct a message, directionality and word processing or revision (self-correction).

Psycholinguistic Focus of Instructional Components

In the following section, techniques will be listed in terms of psycholinguistic focus and specific strategies. For each technique, psycholinguistic focus will be indicated by the following abbreviations in the chart:

[CWW] - Cues within words

[CWFL] - Cues within the flow of language

[CWR] - Cues within the reader

Technique	Focus	Strategy
1. Reading books to student	word configuration	point to words while reading
	affixes	check understanding of affixes
	whole known words	ask to find known words
	[CWW]	
	patterns of words or function order	read fluently; emphasize language patterns
	inflection and inflectional agreement	read fluently; emphasize endings
	intonation	read with expression
	contextual meaning	questioning; participation
	redundancy in language cues	emphasize target elements
	[CWFL]	
	language facility	read along; discussion
	learned response and strategies	context; substitution; initial letter
	experiential background	anticipatory set
	conceptual background and ability	discussion; application
	[CWR]	

Technique	Focus	Strategy
2. Writing	phonic generalizations	sounds in words; Elkonian Squares (Clay 1979b)
	word configuration	graphic memory/ match
	affixes	revision
	recurrent spelling patterns	writing; predicting
	whole known words	writing in context
	[CWW]	
	patterns of word or function order	syntactic prediction
	inflection and inflectional agreement	revision; comparison
	function words	prediction; cloze procedure
	contextual meaning	composing; revising
	redundancy in language cues	semantic/syntactic prediction; discussion
	[CWFL]	
	language facility	composing; revising
	learned responses and strategies	writing conventions
	experiential background	composition
	conceptual background	writing process; reaction
	[CWR]	

Technique	Focus	Strategy
3. Sentence Maker (Mackay, Thompson & Schaub, 1978)	word configuration	visual matching
	affixes	manipulation
	recurrent spelling patterns	comparison/ discovery
	whole known words	creating sentences; finding words
	[CWW]	
	patterns of word or function order	using function words in context; building on similar patterns of words
	inflection and inflectional agreement	comparison; revising; manipulation
	function words	manipulaion; cloze procedure
	intonation	reading sentences
	contextual meaning	cloze procedure
	redundancy in language cues	cloze procedure; build upon similar patterns of words
	[CWFL]	
	language facility	creating sentences
	learned responses and strategies	revising; self-checking
	experiential background	making sentences; recreating experiences
	conceptual background	manipulating language in a meaningful way
	[CWR]	

Technique	Focus	Strategy
4. Independent Reading (*Breakthrough to Literacy* books, library books, original stories, Sentence Maker sentences, signs, print in the environment)	word configuration	reading; identifying words
	affixes	uses affixes
	whole known words	reading
	[CWW]	
	patterns of word or function order	reading for meaning
	inflection and inflectional agreement	miscue analysis; self-checking
	function words	reading for meaning
	intonation	reading with meaning
	contextual meaning	cloze procedure; substitution
	redundancy in language cues	reading for meaning
	[CWFL]	
	language facility	developing fluency in reading
	learned responses and strategies	predicting, confirming/rejecting strategies cloze procedure
	experiential background	using title/picture clues; developing schemata for stories; bringing experience to reading
	conceptual background	discussion; wide reading
	[CWR]	

Technique	Focus	Strategy
5. Wordless books	patterns of word or function order	creating stories; revision
	inflection and inflectional agreement	lessons; revision
	function words	creating stories; listening to sef;
	intonation	story schema
	contextual meaning	creating stories; revision
	redundancy in language cues	using patterns in stories
	[CWFL]	
	language facility	creating stories
	learned resonses and strategies	story schema
	experiential background	tap experience for material
	conceptual background	situational cues; meaningful stories
	[CWR]	
6. *Sesame Street* magazine activities	contextual meaning	situational cues
	[CWFL]	
	language facility	explanation and discussion
	learned responses and strategies	predicting/ confirming strategies
	experiential background	tapping and developing
	conceptual background	meaningful print and non-print language experiences
	[CWR]	

Technique	Focus	Strategy
7. Cut-up Stories (Clay, 1979b)	word configuration	matching/ identifying words
	affixes	lessons; self-corrections
	whole known words	manipulating words
	[CWW]	
	patterns of word or function order	reconstructing process
	function words	reconstructing process
	contextual meaning	cloze procedure; self-checking
	redundancy in language cues	reconstructing process
	[CWFL]	
	language facility	provide practice in meaning and fluency
	learned responses and strategies	predicting/confirming strategies
	conceptual background	reconstruction of language
	[CWR]	

Summary

In this chapter, the design of the study was described including methods and materials. Psycholinguistic applications were discussed in terms of the instructional components of the program. Techniques and strategies were identified according to the three cue systems discussed- -graphophonic, syntactic and semantic.

Chapter III

Findings and Implications

Observations will be described in this chapter, followed by conclusions and implications for the classroom and for further research. The case study format does not make a case for generalizations as Torrey (1973) stated in her study of a single subject. This does not negate the powerful implications such an in-depth observation can provide

Analysis and Interpretation of Data

Clay Data

The following data were collected using assessments developed and researched by Clay (1979b).

Diagnostic Procedure		Pre-test	Post-test
-Letter Identification	Raw Score	51	53
- reversed b, d, and q.	Stanine	5	6
-Concepts About Print	Raw Score	10	21
- See Appendix A.	Stanine	2	7
-Ready to Read Word Test	Raw Score	1	11
- words presented in isolation; read missed words in context	Stanine	1	4
-Test of Writing Vocabulary	Raw Score	1	30
- standard spellings written in ten minutes; not dictated	Stanine	1	4

Other Data

The following data were collected in the form of antecdotal records, tape recordings and student notebooks. Brief observations which are considered significant are noted.

Oral Retelling of Stories Initially S would say, "I don't know," or give brief responses. Recall was usually satisfactory when prompted. Later in the program, S included more events in sequence in retelling stories. She often used her own language which indicates higher level comprehension. No prompting was necessary to elicit summaries. Sometimes, important details were left out.

Oral and Written Cloze At first, Sc supplied words which did not seem to be the result of graphophonic, syntactic or semantic cuing system strategies. Within a short time, she was using syntactic and semantic cues in oral cloze activities. She was able to predict appropriate words in difficult material when presented orally. Cloze activities using the Sentence Maker were completed successfully as well. By the end of the program, S used an initial letter (graphophonic) cue in addition to syntactic and semantic cues to predict words.

Sentence Maker Sentences were short and simple in the beginning. When asked to change one word within a sentence

pattern, S would put all words back into the Sentence Maker and then search for these same words to construct the "new" sentence. After a while, S realized she didn't have to do this. As new words were added to the Sentence Maker, S a began to request blank cards for personal words, unwilling to be restricted by a controlled vocabulary and anxious to use her own natural language. During the third week, Sc wanted new words at every session. Too many new words were added too quickly; S stopped asking for new words, adjusting her learning rate, until she was ready for more. By the sixth week, S would point to words in the Sentence Maker for which she did not have word cards and say, "I'm ready for jump and work.

As affixes and punctuation were used in other components of the program, they were added to the Sentence Maker. S rarely forgot to use them and when she did, she would self correct after rereading the sentence aloud or being prompted. A lesson in subject-verb agreement was reinforced with the Sentence Maker; Sc consistently used the standard form despite its absence from her conversational speech. By the end of the study, Sc a enjoyed using 118 word cards, four word endings (-es, -s, -ed, -ing), and two punctuation marks (period and question mark). She added twenty-six personal words which she used regularly during the ten week period. She also learned to put a space between her words when writing because of the space between words which was used with the Sentence Maker.

Discussion of Stories Initially, S a would frequently respond, "I don't know," or supply brief answers in a quiet, strained voice. When prompted, she usually did better but inferential comprehension questions were not usually answered satisfactorily. In time, S did not need prompting and initiated discussions confidently although inferential comprehension remained uneven.

Sc definitely became actively involved in these stories. Gradually her predictions concerning what was going to happen next became more appropriate. She began to develop an understanding of story structures and would make predictions without being asked. Many times, she would join in the reading of stories with patterned story lines. As she gained experience and understanding of stories, S was able to make sophisticated comparisons of themes despite no similarity between actual characters and events. She compared the cunning trickery of Liza Lou in Liza Lou and the Yeller Belly Swamp (Meyer, 1976) with the old woman in Mosel's Funny Little Woman (1972). She also began to notice differences in dialect in the stories and used new words and expressions frequently. S became an active listener and asked questions to clarify confusions. This participation seemed to have an effect on her oral and written expression.

See Appendix B for a list of the books read with S .

Oral Reading S could "read" three sentences from an Open Court primer at the beginning of the study. These were apparently memorized because when the words were rearranged, she could not read them. The Breakthrough books were interesting to S . She enjoyed the rhymes at the end of the books and was able to relate to some of the situations. She was successful in reading and understanding them and glady read for any willing listener.

S was able to reconstruct parts of the story that were read to her with the cut-up words. She began to recognize quotation marks and make connections with linguistic conventions such as affixes and punctuation. The most productive observation miscue analysis provided was the self-correction behavior which indicated S was reading for meaning. She was beginning to make sense of print.

Initially S tended to use graphophonic cues (first letter) for word attack during oral reading. When this did not work and the sentence was read aloud to her with a "blank" for the unknown word, she was able to use syntactic and semantic cues to supply the correct word. Lessons in using context and graphophonic cues eventually contributed to S 's combined use of these strategies in self corrections and word attack. Meaning became the preferred strategy and graphophonic cues were used for support.

Writing Clay's (1979b) rating technique for writing during the early reading stage was used to assess writing samples. Various elements within three areas of written language are assessed: language level, message quality, and directional principles. Assessment for each of these categories is expressed in terms of "not yet satisfactory" (1-4) or "probably satisfactory" (5-6). Language samples were rated at the beginning, middle and end of the program:

	Beginning	Middle	End
Language Level	3	5	5
Message Quality	5	5	6
Directional Principles	5	6	6
Totals	13	16	17

S   knew she did not know standard spellings for writing. This inhibited her, and she needed constant assurance that her own "invented spellings" were acceptable. Once she accepted this, she produced writing that was impressive in terms of content or message. At first, spelling errors were irregular with both omissions and insertions of letters and sounds. The frequency with which standard spellings began to appear in her writing increased gradually during the study. Other errors involved syntax; these were often acceptable in the dialect she spoke. Some of the phonetic spellings also reflected this dialect.

S used the revision process often after learning about it. Sometimes, she would try three or four times to produce a word she wanted in her compositions. After giving her an opportunity to revise, a different color marker was used in conjunction with a prompt to revise a target element. As she became more familiar with the revision process, she consistently used insertion marks to add words she had forgotten and crossed out words she wanted to change. She was invested in making her writing meaningful.

S was eager to express personal messages in writing, but had to be assured that non-standard spellings did not make her writing "bad." Her first original books were modeled after other books she had read, but always extended the story to make it her own. S gradually became aware of story conventions such as title page, dedication, logical sequence and structure (beginning, middle and end). After reading a book she enjoyed, S often drew a picture and wrote a sentence about the story, usually expressing herself in her own words. See Appendix C for representative writing samples.

Wordless Picture Books initially confined her "text" to the individual illustrations on each page, failing to make connections or develop a story. Her voice was soft and strained. Two weeks later, she had clearly begun to develop a schema for stories as she began, "Once upon a time..." In the last two books, S 's stories developed

logically and she imposed inferential attributes and reactions to the characters and events. S skill at expressing a story she had to create was probably influenced by the shared literacy experiences in which she had participated. Stories were no longer labels for individual pictures, but were meaningful and had continuity. See Appendix D for a comparison of Sc 's stories at the beginning and end of the program.

Integrated Analysis

Based on the data and observations presented, it is apparent that Schneika was able to develop and integrate strategies as she engaged in an instructional program in which psycholinguistic theory was applied. In a synthetic phonics reading program, S had not emerged as an "early reader" (Holdaway 1980). During the course of the study reported here, Schneika actively pursued print by using effective strategies to bring meaning to it. This implied that she approached reading differently as a result of these techniques.

It was difficult for S to give up exclusive reliance upon phonics. At times, she would laboriously sound out a word she wanted to read or write. Gradually, she began to use syntactic and semantic cues increasingly in language processing.

When read to, S became aware of patterns and redundancies in language, listening for and anticipating them. This awareness manifested itself as she retold stories and created text for wordless books. She began to ask relevant questions and listen for answers. She incorporated this awareness in oral expression. Increased language facility, use of whole words and affixes, and contextual strategies were observed during oral reading and writing, suggesting functional use of instructional strategies.

Most noticeably, S was observed using context and prediction strategies during reading which suggests not only improved reading, but an increased tendency to use cognitive strategies to read for meaning. Because she was successful in using these strategies, meaning seemed to emerge as the preferred emphasis for reading. She had come to realize that the predictions she made had to make sense. She was beginning to use more nonvisual information during reading.

Conclusions

The applications of psycholinguistic theory had a positive effect on the reading strategies of this student. She began to participate in meaningful literacy events. As she engaged in these interactions, she began to ask "the right questions" (Torrey, 1973, p. 156) and adjusted learning to meet her needs.

The fact that her family supported the program and participated in these literacy events is significant as

well. Reading and writing became an important part of communication in her home and this shared learning was invaluable to the program.

Implications for the Classroom

Goodman (1973) cautioned against the use of pscycholinguistics in regard to a method or program for reading instruction. Because reading is seen as a developmental learning process, the individual needs of children cannot be prescribed in a "psycholinguistic scope and sequence" chart. Instead, as Goodman (1973) and Holdaway (1979, 1980, 1984) suggest, and as supported by the observations in this study, psycholinguistic theory provides an effective framework from which existing materials and programs can more efficiently be utilized.

The holistic perspective of language and its natural connection to meaning and communication is absent in programs which are restricted by basal reader vocabulary and content, sight words or phonics. Instruments for evaluating listening comprehension, oral expression, writing and reading comprehension must be refined to be sensitive to functional language processing. Assessment should consider all areas of language rather than an isolated reading score.

Teachers might better understand how children learn to read when it is discovered <u>why</u> children learn to read. The functions of language focus on meaning. Communication,

reading for meaning, seems to be a motivating factor in learning to read. Perhaps children who are not successful in a synthetic phonics program do not see the meaning in the process.

Implications for Research

A study in which a testing population of students unsuccessful in a synthetic phonics program is divided into a control group which would receive remediation within the code-emphasis framework and an experimental group in which participants would engage in instruction based on the applications of psycholinguistic theory may provide insight into the reading process. In this way, the effect of this different, meaning-emphasis approach to reading might be compared with remedial techniques recommended by code-emphasis programs.

Studies comparing readers who receive beginning reading instruction that is truly meaning-emphasis with students in other programs may also provide data to clarify the effectiveness of these theories. The method of assessment would be crucial as many current standardized reading tests at the primary level test isolated skills rather than reading for meaning.

A final topic for future research might be the effect of parent participation on reading programs. Parents sharing in developmental learning activities rather than uninvolved parents or parents who provide "skills" help may prove to be a critical factor to overall success.

Summary

In this chapter scores and observations were described and analyzed. The data suggested that this program, based on the practical applications of psycholinguistic theory, was successful in that S --previously a nonreader-- emerged as a reader, writer, and communicator.

It was implied that reading for meaning is, in itself, motivation for learning how to read. More studies must be conducted with larger populations to validate these findings.

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Appendixes

Appendix A

Both forms of <u>Concepts About Print</u> (<u>Sand</u> and <u>Stones</u>) were used with SC . She felt bad during the first test because she knew she was not able to give correct answers. During the program, S was eager to learn about print and would ask questions when she was unsure about something. During the second testing, S was confident and remembered certain questions she had not been able to answer on the first test.

Sc made considerable growth in a short period of time. The errors she did make during the second testing were subtle. Because the material was read to her and it made sense, S was frustrated that she couldn't locate "what was wrong."

CONCEPTS ABOUT PRINT SCORE SHEET

Date: 3/1/85

Name: Schr Age: 6-7 TEST SCORE 10

Recorder: Date of B STANINE GROUP 2

PAGE	SCORE	ITEM	COMMENT
Cover	1	Front of book	
2/3	1	2. Print contains message	
4/5	1	3. Where to start	
4/5	1	4. Which way to go	
4/5	1	5. Return sweep to left	
4/5	0	6. Word by word matching	Read slowly - she couldn't match words.
6	1	7. First and last concept	
7	1	8. Bottom of picture	
8/9	0	9. Begin 'The' (Sand) or 'I' (Stones) bottom line, top OF turn book	Seemed confused
10/11	0	10. Line order altered	DK (confused)
12/13	1	11. Left page before right	
12/13	0	12. One change in word order	] NO IDEA - DIDN'T LOOK AT PRINT FOR ANSWER
12/13	0	13. One change in letter order	
14/15	0	14. One change in letter order	
14/15	0	15. Meaning of ?	It's a period.
16/17	0	16. Meaning of full stop	the end of a word
16/17	0	17. Meaning of comma	DK
16/17	0	18. Meaning of quotation marks	DK
16/17	1	19. Locate M m H h (Sand) OR T t B b (Stones)	
18/19	0	20. Reversible words was, no	
20	0	21. Show one letter, show two letters	] Didn't seem to understand how to use the cards.
20	0	22. Just one word: 2 words	
20	1	23. First and last letter of word	
20	0	24. Capital letters	Knew it as "big letter"

10

CONCEPTS ABOUT PRINT SCORE SHEET

Date: 6/3/85

Name: e_ Age: 6-10 TEST SCORE [21]

Recorde pugliese Date of STANINE GROUP [7]

PAGE	SCORE	ITEM	COMMENT
Cover	/	1. Front of book	
2/3	/	2. Print contains message	This is easy
4/5	/	3. Where to start	
4/5	/	4. Which way to go	
4/5	/	5. Return sweep to left	
4/5	/	6. Word by word matching	
6	/	7. First and last concept	
7	/	8. Bottom of picture	I remember this one.
8/9	/	9. Begin 'The' (Sand) or 'I' (Stones) bottom line, top OR turn book	
10/11	/	10. Line order altered	That's wrong.
12/13	/	11. Left page before right	
12/13	0	12. One change in word order	studied pages, but didn't respond correctly (frustrated)
12/13	0	13. One change in letter order	
14/15	0	14. One change in letter order	
14/15	/	15. Meaning of ?	you taught me this one.
16/17	/	16. Meaning of full stop	end of a sentence
16/17	/	17. Meaning of comma	slow down a little
16/17	/	18. Meaning of quotation marks	speech marks
16/17	/	19. Locate M m H h (Sand) OR T t B b (Stones)	
18/19	/	20. Reversible words was, no	looked carefully before pointing
20	/	21. Show one letter, show two letters	
20	/	22. Just one word: 2 words	
20	/	23. First and last letter of word	
20	/	24. Capital letters	I know what these are now

21

Appendix B

List of Books Read with S

Aesop. (1962). The hare and the tortoise. NY: McGraw-Hill.

**Alexander, M. (1970). Bobo's dream. NY: Dial Press.

Benchley, N. (1964). Red Fox and his canoe. NY: Harper and Row.

Brown, M. (1947). Stone soup: an old story. NY: Scribner.

Carle, E. (1984). The mixed-up chameleon. NY: Crowell.

Clifton, L. (1973). The boy who didn't believe in Spring. NY: E.P. Dutton.

DePaola, T. (1975). Strega Nona. NJ: Prentice-Hall.

Eastman, P.D. (1960). Are you my mother? NY: Random House.

Geisel, T. (1954). Horton hears a who. NY: Random House.

Grimm, J.L., & Grimm, W.K. (1968). Little Red Riding Hood. Cleveland: World Publishing.

Hancock, S. (1972). Mario's mystery machine. NY: G.P. Putnam's Sons.

Lionni, L. (1969). Alexander and the wind-up mouse. NY: Pantheon Books.

Lionni, L. (1979). Geraldine, the music mouse. NY: Pantheon Books.

Lobel, A. (1970). Frog and toad are friends. NY: Harper and Row.

Lobel, A. (1963). Prince Bertram the bad. NY: Harper and Row.

Mack, S. (1974). Ten bears in my bed. NY: Pantheon Books.

**Meyer, M. (1967). A boy, a dog and a frog. NY: Dial Press.

**Meyer, M. (1973). Frog on his own. NY: Dial Press.

**Meyer, M. (1974). The great cat chase. NY: Four Winds Press.

**Meyer, M. (1976). Hiccup. NY: Dial Press

Meyer, M. (1976). Liza Lou and the yeller belly swamp. NY: Parents' Magazine Press.

Mitgutsch, A. (1981). From fruit to jam. Minneapolis: Carolrhoda Books.

Mitgutsch, A. (1981). From seed to pear. Minneapolis: Carolrhoda Books.

Mosel, A. (1972). The funny little woman. NY: E.P. Dutton.

Pinkwater, D. (1984). Devil in the drain. NY: E.P. Dutton.

Potter, B. The tale of Peter Rabbit, NY: Warne.

Sadler, M. (1983). It's not easy being a bunny. NY: Random House.

Sonneborn, R. (1971). I love Gram. NY: Viking Press.

The three bears. NY: Clarion Books.

Zemach, M. (1983). The little red hen: an old story. NY: Farrar, Straus and Giroux.

** Wordless picture books

Holdaway (1979) has been writing about shared books as joyous literacy events to be read to children. Sometimes referred to as "big books" these were also used with S

The Story Box books (Level One Emergent Books) are published by Shortland Publications
360 Dominion Road, Mt. Eden
Auckland, New Zealand
They are distributed in the United States by the
Wright Group
7620 Miramar Road
Suite 4100
San Diego, CA 92126

Appendix C

Writing Samples

Four smaples of S 's writing are included to demonstrate the growth she made in writing during the program. What can't be documented is the enthusiasm she developed toward writing after accepting that her "invented spellings" were not "bad." This took quite a while as S felt that everything she wrote had to be letter perfect and as a result did not do much writing.

Some of the characteristics which can be identified in these samples are:

-use of the revision process

-increased standard spellings

-improved sentence structure

-use of punctuation and parentheses

-attempts to record own ideas

-successful composition

3/11

garm. I gotoe my garm.
I'm going to my gram

hos to wid my ots
house to ride my aunt's

hos.
horses.

4/14/85

fich nre good to ~~e~~
fish are good to

nte. I Liek ~~cioe~~
eat. I like

cipes. (frinfis). I Liek
chips (french fries) I like

to lak at fich.
to look at fish.

I Liek ~~Ga~~ Gold fich
I like gold fish

bat not fro my ~~tek~~ tea.
but not for my tea

the cat, the bird and the tree

4/15/85

The cat cad not catc
The cat could not catch

The brd. The brd
the bird. The bird

a Gadt a waea.
got away

The Hare and the Tortoise [illegible]

6/3

47

The Toddis wan the
The tortoise won the

ras: ~~deka~~ bekas the
race because the

rabi tak a rast.
rabbit took a rest.

The toddis was slow ~~d~~ and
The tortoise was slow and

the rabi thot that
the rabbit thought that

the ~~ra~~ toddis wad'nt
the tortoise would'nt

bet the ~~rad~~ rabit
the

the Toddise was smrt.
The tortoise was smart.

Slow and stad wins the
Slow and steady wins the

ras.
race.

Appendix D

Wordless Picture Books

The texts which S created for the wordless picture books were tape recorded. In order to observe growth in oral expression and the concept of "story," two of the selections are presented here.

Bobo's Dream (first experience)

-Come here, Bobo.

-May I have a bone?

-Bobo and Robert walked somewhere.

-Robert unpacked the bone and gave it to Bobo.

-Then a big dog came and snatched the bone away from Bobo.

-Then Bobo was starting to get Robert so he could help get his bone back. (P)

-And then Robert said, "Give me back the bone please."

-This is my dog's bone. (P)

-So Bobo licked him on his cheeks and then Bobo layed down.

-Bobo went to sleep.

-Bobo started dreaming.

-Robert kicked it so high that it went over his friend's head.

-It went near these two boys and the dog.

-Robert said.. Robert and his friends went to go get the ball. "Gimme back the ball.

-No. Robert took the ball from my dog.

-Bobo woke up. Get my ball back.

-This way Bobo.

-Then Bobo started to growl and then the two boys got scared and throwed the ball back to him.

-And then everybody started to get on his back.

-And then the big dog came and Bobo kept his bone.

-Then Bobo looked at him and just growled at him and walked away.

The End

<u>A boy, a dog and a frog</u> (fourth experience)

-Once upon a time, a boy and his dog was taking a walk.

-The boy saw a nice pond with a frog in it. He wanted to catch the frog.

-The boy and the dog started running to get the frog. But they was running so fast, they tripped over a tree and started falling...

-right into the water. When the boy put his head out of the water, the frog was smiling right in his face.

-The boy went to grab the frog, but the frog was too fast.

-The frog jumped onto a log and smiled at the boy and the dog.

-The boy sent the dog to one side and he went to the other side of the log. They were going to trap the frog. They started to get close to the frog.

-The boy held his net way up and the dog went to hold the frog. The frog jumped away too fast and the boy caught his own dog in the net. (giggle)

-The frog ran away and watched the boy and the dog.

-"We're gonna get you, frog...someday!" they said.

-The boy and the dog walked away. The frog was sad because he wanted to play.

-The boy and the dog are sad too because they couldn't catch the frog. THe frog is watching them leave.

-The frog is sad and all alone.

-He follows the boy and dog footprints till he gets to the boy's house.

-The boy and the dog is in the bath tub. The frog goes into the bathroom and smiles at them.

-The boy and the dog is surprised to see him. The frog jumps into the tub.

-Everybody is together and happy.

The End

(P) - needed prompting.