

DYNAMIC VERSUS STATIC TESTING:
IMPACT ON READING PLACEMENT
OF READING UNDERACHIEVERS

By

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In memory of my mother,
Charlotte A. Kragler,
whom I dearly miss.

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The study was conducted to investigate Vygotsky's concept of the zone of proximal development as it applies to reading placement of low socioeconomic reading underachievers. The primary purpose of the study was to compare the effect of static and dynamic assessment procedures on reading placement. The object was to determine the effect dynamic assessment procedures have on reading placement.

The second purpose of the study was to determine if these reading placements could be maintained during instruction of a basal story.

Twenty-one third graders of low reading achievement were randomly assigned to a mediated experimental group and a nonmediated control group. Subjects were administered

the comprehension section of the Gates MacGinitie Reading Test, silent reading passages of the Houghton Mifflin Informal Reading Inventory at the third and fourth grade levels, and listening passages of the Houghton Mifflin Informal Reading Inventory at the fourth and fifth grade levels. The students also received instruction of a basal story at the fourth grade level.

Vocabulary development was the aim of the mediation for the dynamic assessment procedures. The experimental group received the mediation prior to the reading of the passages and basal story. The nonmediated control group did repeated reading on all the passages.

Comprehension of the informal reading inventory passages and the basal story was assessed by free and prompted recall.

The analysis of covariance was used to analyze the results of the study. The results indicate that the dynamic assessment procedures elevated both the experimental group's silent reading and listening level one grade level above the static placement procedures. Diagnosis of this higher zone of functioning required a mediated vocabulary treatment prior to the exposure to the silent and listening informal passages. The control group's repeated reading of the passage did not significantly elevate reading placement.

The experimental group could maintain the higher reading level following a mediated reading lesson. The control group could not maintain the higher reading level following a traditional reading lesson.

CHAPTER I INTRODUCTION

Assessing and placing students in instructionally appropriate reading materials is a perennial concern of educators in the elementary school. The goal of the teacher's decision is to place students in books that they can be engaged with profitably. Placement in books that are too difficult creates frustration and little positive learning will likely take place (i.e., the frustration level). Conversely, placement in books that are too easy provides practice but reading growth will not be fostered (i.e., the independent level). Placement in books needs to be at a level that, given guidance and support, will enable children to maintain optimum reading growth (i.e., the instructional level).

Among the specific procedures currently used for reading placement are the informal reading inventory, basal placement tests, and standardized achievement tests. Each uses a static testing paradigm, a paradigm where a student's level of functioning is determined independently of any social interaction between the student and teacher. The teacher, following standardized procedures,

administers these tests which presumably provide an objective measure of the student's reading ability. This test paradigm treats reading ability as a discrete, decontextualized trait. The students are allowed no support or aids throughout the testing period. The students cannot ask friends or the teacher how to pronounce a word or look at other resources to help determine the answer. These static tests, while useful for measuring what the students can read and understand without support, do not indicate the levels of reading materials that students can read with teacher support. Further, under the static paradigm, no information is provided regarding the amount or types of instruction needed to maintain adequate reading progress within the context of a reading lesson.

Due to the methodology of the static model, students might be improperly placed in their reading materials. Therefore, the use of these static tests may be misleading in prescribing students' reading placement.

The focus of this study is on reading placement using the dynamic paradigm, a paradigm based on a social interaction model between the teacher, the students, and the test. In this paradigm, the adult mediates and/or redefines the students' perceptions of the task. The teacher monitors and gives aid as needed throughout the

test. Due to the verbal interactions and support given, students' performances on the task will likely be elevated. The dynamic paradigm assesses reading levels in a social context similar to the context of a reading lesson. Reading assessment is not a single, discrete measure of the student's reading behavior. The impact of background knowledge, mediation, and other aspects of the reading process on a student's reading behavior can be analyzed with this paradigm. Because of the contextual approach of this assessment model, the dynamic paradigm not only has curricular implications by affording the teacher a more adequate understanding of students' reading behaviors, it may also affect placement decisions. As a general rule, it seems logical to expect that higher reading placements will result from using the dynamic mediated assessment paradigm rather than from a static assessment paradigm. At issue in this dissertation is whether the usefulness of the dynamic paradigm can be demonstrated empirically.

Statement of the Problem

The purpose of this study was twofold. One major purpose was to investigate whether a dynamic paradigm reading assessment strategy results in higher levels of performance than a static assessment paradigm. Informal reading and listening passages were used for this purpose.

The second purpose was to ascertain whether students could benefit from instruction in a basal story at a higher level of difficulty than would normally be indicated by the assessment using the static paradigm.

The essence of the study was to compare the performance of an experimental group and a control group. All students (a) silently read a third and a fourth grade informal reading passage, (b) listened to a fourth and fifth grade informal reading passage, and (c) were instructed using a fourth grade basal story. In each activity, the experimental group was exposed to a treatment based on the dynamic paradigm. The control group received a treatment based on the static paradigm.

Hypotheses

The research hypotheses are stated in the null hypothesis form. The statistical analysis of each hypothesis is described in Chapter III.

1. After reading a third-grade informal reading inventory passage, there will be no difference in the average number of story events recalled by the experimental and control groups.

2. After reading a fourth-grade informal reading inventory passage, there will be no difference in the average number of story events recalled by the experimental and control groups.

3. After listening to a fourth-grade informal reading inventory passage, there will be no difference in the average number of story events recalled by the experimental and control groups.

4. After listening to a fifth-grade informal reading inventory passage, there will be no difference in the average number of story events recalled by the experimental and control groups.

5. After reading a fourth-grade basal story, there will be no difference in the average number of story events recalled by the experimental and control groups.

Justification of the Study

Within the field of reading education, support for dynamic testing procedures can be found. Placement decisions affect amount of learning and produce different types of teacher/pupil instructional patterns (Allington, 1983; McDermott, 1976). Students in lower reading groups have more emphasis on phonics than the higher groups. These students spend more time on oral reading that emphasizes word identification and pronunciation, while reading comprehension is emphasized for students in higher level reading groups. The latter engage in more silent reading every day than do lower placed students (Allington, 1984).

Due to the impact of placement on instructional patterns, investigating the current placement methodology

is critical. Given the decontextualized nature of the static paradigm of reading assessment, one cannot ascertain what affected the student's performance on a reading test. Inability to function on a reading test could be due to (a) lack of background/world knowledge, (b) inadequate language development, (c) inadequate reading skills, (d) behavioral characteristics of the students, (e) student's interpretation of the test item different than the expected response, or (f) other considerations and combinations of the above (Royer & Cunningham, 1981). But, an examiner cannot determine this on a static measurement. Consequently, not only will placement decisions be affected but planning an adequate reading program becomes difficult. One needs to adequately assess the students' placement level to offer the best curriculum possible and to maximize the students' growth in reading.

The dynamic assessment model offers an alternative to the static placement methodology for reading placement. Most of the research dealing with this paradigm exists in the area of intelligence testing of learning disabled children. The use of this methodology in this area has shown increased I.Q. scores of learning disabled students (Budoff, 1972; Feuerstein, 1980). Initial pilot studies using this concept on reading placement have found

that students can function with materials judged too difficult for them using the static paradigm (Dixon, 1983; Newman, 1983). Lovitt and Hansen (1976) found that learning disabled students could be placed at different levels if the placement tests were given in a format similar to instruction. No other research has been done to ascertain the effect of the dynamic paradigm on reading placement. There is little information on the impact of this assessment on reading placement of elementary students. Given the contextual aspects of this paradigm, a higher placement might result along with more reading growth.

The dynamic assessment and consequent higher reading placement might be especially beneficial for low achieving students. Due to the traditional method of placement and current educational practices, low socioeconomic students (SES) who are underachieving in reading are maintained at low conceptual development. Consequently, reading progress is somewhat limited. The dynamic assessment might place these students at a higher level of reading placement. The mediational aspect of this model would give the teacher information on planning a reading program to provide more rapid growth in reading. The dynamic paradigm would allow educators to see if low SES, underachievers can function with challenging reading materials and profit from instruction with materials closer to their static frustration level.

Limitations

Several conditions limit the generalizability of the findings of this study. Recognition of these limitations of scope is essential for accurate interpretation of the results of the study.

1. The study was confined to third grade students enrolled in a Chapter I and summer school class in an elementary school in a north-central Florida city.

2. The scope of the study was limited to an investigation of vocabulary mediation strategy. Other types of mediation strategies were not studied.

3. The scope of the study was limited to the investigation of the effects of vocabulary mediation on reading comprehension as measured by story recall of the various passages used in the study.

Assumptions

The basic assumptions underlying the study are the following:

1. Current static data would classify all these students as underachievers in reading. The students were reading from six months to two years below grade placement as indicated by the scores on the informal reading inventory, Gates MacGinitie Test and the Metropolitan Achievement Test. School practices assume this type of data to be representative of any given student's reading behavior.

2. Recall of the informal reading inventory passages and recall of the basal story is a measure of the student's ability to understand the text. For example, utilizing materials at the frustration level precludes a pretest sensitization effect on the students.

3. The variable, vocabulary mediation, identified in the study does not preclude that other variables, such as background knowledge, may have interacted with the dependent variable comprehension recall.

Definitions of Terms

The following is a list of terms used in the dissertation.

Directed reading lesson. A lesson in which the teacher mediates between the student and text to provide a context for the reading act. The teacher-guided lesson involves the following steps: (a) motivation, (b) background and vocabulary development, (c) setting of purposes for reading, (d) reading the text, and (e) comprehension assessment. Elaboration of the text and extension of the text theme can follow these steps.

Dynamic assessment. An assessment approach that emphasizes a social dialogue between the examiner and students. The examiner gives aid throughout the assessment period. The approach seeks to measure the degree of the student's modifiability by providing a focused learning experience.

Emergent reading level. Higher reading levels than what a student can sustain under direct guidance and support by a knowledgeable teacher or tutor (Powell, 1983).

Frustration reading level. Level of difficulty at which the reading task behavior breaks down. The materials are too difficult for the student to adequately process.

Independent reading level. Level of difficulty that students can read text easily without instruction and without assistance.

Informal reading inventory. A placement test used to analyze an individual student's reading performance on progressively more complex paragraphs.

Instructional reading level. Level of difficulty at which students can read and understand text with support and assistance from a teacher.

Listening comprehension. Maximum level of difficulty that the student can understand while listening to another read aloud. Listening comprehension gives an indication of a student's potential in reading.

Mediation. Social and verbal interaction between the student and teacher to increase student's ability to read and understand more difficult text. The purpose of the mediation is to increase the student's self-regulation of the learning process.

Reading placement. Placement of student in materials that are challenging and can be processed with instruction from a teacher.

Static assessment. Test methodology emphasizing the student's base level of development achieved without assistance by the examiner. This methodology provides a profile of an independent level of functioning of the child.

Zone of proximal development. "The discrepancy between the child's actual developmental level as determined by independent reading and the potential developmental level as determined through reading under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86).

Overview of the Design

The basic design of the study was the pretest-posttest randomized groups design. The subjects were summer school and Chapter I students enrolled in a local elementary school. The students were given the comprehension section of the Gates MacGinitie Reading Test and the silent paragraphs of an informal reading inventory. The Gates and the informal reading inventory were given to determine the students' current levels of achievement and placement according to the static paradigm.

The students were then randomly assigned to the experimental and control groups. The subjects were given

informal reading inventory passages at their frustration level. The experimental group received a vocabulary mediation strategy prior to reading the passage once. The control group read each passage twice. This was done to roughly equalize the amount of exposure to the key vocabulary words in the passage.

All comprehension in the study was assessed by a free and prompted recall of the informal reading inventory passages and the basal story.

Organization of the Remainder of the Study

Chapter II is an overview of the related literature pertaining to the relevant fields of inquiry. Chapter III will outline and describe the procedures of the study. Chapter IV will present the analysis of the data, the findings, and the discussion of the results. Chapter V will present a summary of the study as well as implications for future research.

CHAPTER II REVIEW OF THE LITERATURE

Vygotsky's theory of cognitive development provides a basis for the reformulation of many current reading placement and teaching strategies. Vygotsky's "general law of development of higher mental functions postulates that mental functioning occurs first between people in social interaction and then within the child on the psychological plane" (Wertsch, 1984, p. 2). Vygotsky's theory claims that the very structure of the child's mental functioning is derived from these social interactions. He asserts that any problem solving a child can do currently with adult mediation, can be done "tomorrow" individually. These processes have then been transferred from the interpsychological plane to the intrapsychological plane. Of central concern to Vygotsky is the role of the language of the child and the adult as it pertains to the development of these thought processes. Vygotsky views cognitive development as the internalization of these various problem solving processes in the child. Language and mediation provide the social context for the development and internalization of these

processes. Vygotsky's zone of proximal development entails the role of language, mediation, and social context in the cognitive development of the child. The concept of a zone of proximal development provides a theoretical rationale for the proposed paradigm shift in reading placement.

Vygotsky defined the zone of proximal development as the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (1978, p. 86). The zone concept emphasizes both the child's intellectual processes as well as the potential growth the child might achieve. For Vygotsky, the child's ability to benefit from instruction was more indicative of the child's potential. A focus on independent problem solving in testing highlights the child's past achievement and does not reveal what intellectual functions are currently developing and maturing. The risk in utilizing a static assessment model is that the child's ability and potential can be greatly underestimated thereby offering a view of the child's competence that will have limited use for planning educational programs (Wertsch, 1984).

The impact of the zone of proximal development on assessment strategies, language, and mediation as it

relates to reading placement will be discussed in the next three sections of Chapter II.

Zone of Proximal Development: Assessment

Wertsch (1984) develops the concept of the zone of proximal development by elaborating the three concepts of semiosis, situational definition, and mediation. Situational definition is the "way in which a setting or context is represented by those who are operating in the setting" (p. 8). Currently, the static assessment model deals with the surface behavior of the child. This model places the child in a highly rigid, static, and artificial environment (Wozniak, 1975). This model also assumes that the child and tester view the context identically. This assumption places a constraint on the child because his/her understanding of the task may be different than the tester's. Even though the child and tester are operating with the same task, if the two interpret the context differently, then the task is no longer the same. Circourel (1974) gives an example of the difference in the interpretation of a task between the child and tester. The adult's view of "things that can fly" was different than the child's. The child acknowledged "that birds can fly but also felt that Walt Disney's Dumbo could fly" (1974, p. 304). Thus, the social context was not the same for both parties. Or, as Bruner (1966) mentions, when a child incorrectly

answers a problem, the teacher needs to find what question the child did answer. The teacher can only understand the child's answer by ascertaining what and why the child answered as she/he did. Thus, with a shift to a mediated/dynamic test situation, the adult can focus a child's attention and can shape the context to insure that they share a similar conception of the task.

The impact of this aspect of the zone of proximal development on testing can be seen in the dynamic assessment model of Feuerstein (1980) and Budoff (1972). Adult/child collaboration is a critical feature in this assessment model. This approach takes a process-oriented approach to testing the intelligence of learning disabled and mentally retarded students. Feuerstein's model involves (a) testing with interaction, (b) training in deficient areas, and (c) retesting without teaching. The goals of Feuerstein's model are to assess modifiability of the individual when she/he is confronted with conditions aiming to produce change and to determine the amount of teacher intervention necessary to bring about a given amount of change. In studies of learning disabled and mentally retarded students dealing with general reasoning tasks, both Feuerstein and Budoff show higher I.Q. scores with the dynamic mode than with the static assessment mode. This is a qualitative model highlighting the

amount and type of instruction and teacher support needed to bring about learning, not just the number of trials needed to learn an activity (Brown & Ferrara, 1985; Elliot & Piersel, 1982; Hilliard, 1982).

Reading placement of underachievers can also be affected by the concept of the zone of proximal development (Zo-ped). Currently, a child is placed using an independent or static assessment paradigm. There is no adult/child mediation. However, pilot studies on the impact of the dynamic assessment paradigm on reading placement have indicated higher reading placements. Average and below average readers were assessed on passages two years above reading placement utilizing a dynamic testing situation. With this strategy the students could read and comprehend these higher level materials. These studies used expository as well as narrative materials (Dixon, 1983; Newman, 1983).

While there is a limited amount of reading placement research dealing with the Zo-ped, the evidence suggests that we may currently be underestimating the child's potential to process prose in reading. By utilizing the dynamic paradigm for placement, the testing situation can be defined similarly for both the student and the examiner for each testing context. The model also provides feedback to the teacher as to what the next instructional

steps should be (Duffy & Fedner, 1978; McClelland, 1973). For example, Vygotsky, in studies of reading comprehension abilities of underachievers, found that underachievers can recall stories as well as normal readers but were unable to answer questions of causality of the characters' actions (Wozniak, 1975). Given the additional information gained with the dynamic assessment paradigm, the teacher can then plan a more appropriate instructional program than would be possible with the static assessment paradigm. The zone concept can provide a more adequate placement as well as instructional information for the teacher.

A dynamic assessment strategy can be developed by modifying the traditional test procedures. The student would be given difficult materials to read independently. When the student failed to comprehend the material, clues and strategies would then be given. Here the examiner assesses not only the types of clues, but the amount of information needed for students to comprehend the material. The amount of aid indicates the student's zone of proximal development (Brown & French, 1979). Vygotsky emphasizes the importance of the transference of knowledge to the intrapsychological plane. Thus, a crucial part of this assessment methodology is another similar problem for the student to solve without assistance. The examiner would

thereby have determined the student's independent level of functioning as well as have knowledge of the student's reading skills and zone for potential in reading.

In conclusion, a dynamic assessment strategy would lead to higher placement because the decision would be based upon the zone of proximal development rather than on what skills have already been acquired.

Zone of Proximal Development: Language

Vygotsky, in his book Thought and Language, has extensively described his theory of language development. Vygotsky's emphasis is on the language of the child and the adult as it pertains to the development of the thought processes. "The language of the environment with its stable permanent meaning points the way that the child's generalization will take . . . the lines along with a concept develops are predetermined by the meaning a given word already has in the language of the adult" (1981a, p. 67). According to Vygotsky, a word is a generalization. "The word's basic function is to abstract and isolate various concepts. It is through the process of adaptation, comparison, and generalization of these concepts that the child's logic develops along with the growth of the child's social speech and whole experience" (Vygotsky, 1981a, p. 157). It is this enabling function of words

that makes it possible to use language to direct attention and consequently direct and expand the child's development (Vygotsky, 1981b).

The abstracting and generalizing functions of language allows one to extend perception because language can be used to represent realities not otherwise available in direct experiences. Luria (1982) suggests the "transition of word meaning to the stage of abstract concepts not only ensures an improvement in processing information but also gives use to a certain freedom in human perceptual processes" (p. 64).

Vygotsky's concept of the relationship between word knowledge and the development of thought can be found in other fields of inquiry. Muller (1889), in his book Natural Religion, stressed that thought and concepts were not possible without words. He felt that words were concepts, and it was of critical importance for the development of the intellect to work with words. Dewey (1933) felt that "learning in the proper sense is not learning things, but the meaning of things and this process involves the use of signs or language" (p. 236). Of course, unless language is tied to experience, words become meaningless things that can be manipulated without awareness of what they signify. It is through contact with words and what they signify that thinking is developed. Dewey (1933),

like Vygotsky, also felt that the primary role for language was to influence others.

Gibson's (1979) theory of perception also has striking similarities to Vygotsky's theory of language. The word mediates for the object in the environment. Word knowledge entails world knowledge. This knowledge of the world is passed to the child through interaction with adults.

It is during the process of abstraction that language evolves past the concrete stage to a context free stage. However, some children have difficulty achieving this abstracted level of language. They are tied to a specific, concrete level of language, and consequently the development of thought processes is hindered. Vygotsky (1981c) found, in mentally retarded and learning disabled children, that the broad, generalizing associations are weakened making it impossible for higher thought processes to emerge and develop sufficiently. It is this inability to form language associations and causality that keeps these children underdeveloped. Bernstein (1972) found social class differences in children's ability to use language abstractly. He found that the low SES child's language was context specific while the middle class child's language was more universalistic or abstract. Because of the school's universalistic language system, the low SES child will meet with failure or show lack of progress, while the others will meet with success at school.

Leacock (1972) contends that there is a false dichotomy between abstract and concrete speech. While language has both of these aspects, a speaker is continually shifting between abstract and concrete speech. An inability to shift from concrete to abstract language levels prevents some students from entering the context of socially shared concepts. Without these shared concepts, communication becomes difficult. As Rommetveit (1974) suggests, one enters in a "reciprocally endorsed contract of complementarity" (p. 55). Without entering this contract, communication is hampered. Luria and Yudovich (1959) feel that all communication becomes impossible without this generalizing function of words.

Leacock contends that "all meaningful speech involves a high and specifically human order of abstraction" (1972, p. 126). While the notion of abstract versus concrete specific language has become dated, children who do not have a broad, expansive language system have limited success within the school environment.

Reading is also affected by the ability to generalize words. When a reader sees a word a "contract by which he/she is committed to an abstract, socially shared and linguistically mediated strategy of categories" has been endorsed (Rommetveit, 1974, p. 86). Cohen and Mosenthal (1979), in a study of student/teacher interactions and

reading comprehension, found that comprehension is not just a function of linguistic ability but is a function of one's ability to understand social meanings as well. Hirsch (1983) makes the statement that a "rich vocabulary is not just a purely technical or rote learnable skill. Knowledge of words is an adjunct to the cultural realities signified by key words and to the whole domain of experiences to which words refer" (p. 160). Athey (1983) concurs by stating, "vocabulary development is crucial but it must consist of the ideas surrounding a concept and not just the dictionary of more and more words" (p. 198). Carroll (Becker, 1977) notes that "much of the failure of an individual to understand speech or writing beyond an elementary level is due to the deficiency in vocabulary. Knowledge of single words and meanings is important, but also the knowledge of the multiple meanings of words and their grammatical functions" (p. 175). It is a lack of conceptual word knowledge that will hinder reading development (Walkerdine & Sinka, 1979). The genesis of the positive relationship between reading comprehension and vocabulary can be based in the language/thought development of the child.

The need for a broad, expansive language system to ensure reading success will impact greatly on teachers. Vocabulary development will need to be more conceptual

rather than oriented towards definitions. Conceptual vocabulary knowledge is the "knowledge of a core concept and of how the concept is realized in different linguistic concepts" (Stahl, 1983, p. 33). This approach implies a method that is rooted in real experiences for the learner. While definitions are useful, more is taught. For example, a contextual approach would build associations and relationships not built with a dictionary approach.

Johnson and Stratton (1966) evaluated five methods of teaching vocabulary concepts to undergraduate students. The methods used were (a) definitions, (b) sentence/context method, (c) classifications--students had to put a word into matching categories, (d) synonym method, and, finally, (e) a mixed method that combined the previous four categories. The test used to assess the effectiveness of these approaches had a combination of test items requiring the use of each method. The students all took the same test. The mixed approach, which is more a true context approach, resulted in higher total scores on the test.

Gipe (1979) investigated techniques for teaching word meanings with third and fifth graders. The methods were (a) association--synonyms, (b) category--student added a word to a list of words, (c) context--student finished a sentence after the target word, and (d) definition--student used a dictionary to determine meanings of words. The

assessment used a variety of test items. For both third and fifth graders, the context approach was a significantly better method of learning word meanings.

In a study comparing a context versus an isolation method of word instruction in kindergarten students, Ceprano (1981) obtained mixed results. The isolation method group learned significantly more words than the context groups, as measured by a word list test, but they were unable to read the words as well in stories. Ceprano found that the results were confounded by the assessment method. Also, the lack of transfer from the isolation mode to reading in context did not hold up for the isolation group. The isolation method was only better on the word list test.

Similar results have been found in other studies. The contextual approach allows for a broader understanding of the words enabling comprehension to be enhanced. Without this approach, words can be learned, but not as well, nor will reading comprehension be facilitated (Andersen & Kulhavy, 1972; Beck, Perfetti, & McKeown, 1982; Crist & Petrone, 1977; Perfetti, 1983).

Vocabulary development should help the learner draw from background knowledge of these socially shared concepts to facilitate comprehension. As Cazden (1982) writes about various context in learning to read, one

context is the internal psychological context of organized semantic networks of knowledge of the world (p. 417). Readers bring this knowledge to the reading lesson. This relationship between background knowledge and reading comprehension has been well documented. The availability of relevant background knowledge affects the quality and quantity of comprehension and recall (Bransford & Johnson, 1972; Johnston, 1983; Langer, 1984; Langer & Nicolich, 1981; Pearson, Hansen, & Gordon, 1979).

To adequately assess a student's reading placement, one needs to ascertain the child's facility with the generalizing function of words. With this knowledge, then, the types and amounts of instruction can be determined. In general, from the above mentioned research, a conceptual approach to vocabulary development is indicated and the amount of instruction is dependent on the background/world knowledge the reader brings to the lesson.

Zone of Proximal Development: Mediation

At the heart of Vygotsky's zone theory is the concept of mediation. With mediation, the language function and the social context are united to make the theory complete. For it is through social dialogue with adults and/or more capable peers that language concepts are learned. The role of adult language is critical in bringing about the expansion and development of the child's language and

thought processes. It is the "joint effort with adult speakers that young children actively forge the integration of these diverse lines of development" (John-Steiner & Tatter, 1983, p. 90). Wertsch (1983) suggests that all "higher mental functions are internalized social functions" (p. 23). Above all else, instruction plays a decisive role in this process of internalization. Without mediation, growth within the zone of proximal development would be negligible for it is with semiotic mediation that the context and social interaction is fully defined and developed (Vygotsky, 1978; Wertsch, 1983).

Within the zone, there are at least four levels of thinking strategies. At the first level of thinking, the adult does all the problem solving. At the second level, the child can respond to specific questions and commands. The third level consists of the child being able to follow nonspecific directions. At this stage, the child has taken over some of the responsibilities for regulating his/her actions. At the last level of thinking, the transition from other to self-directed learning is complete. Throughout these stages of thinking, the role of the mediator is crucial. Without adult mediation, the child's thought/language processes can be underdeveloped. For it is only if the other stages are fully developed that the child can fully make the transition to abstract thought

and problem solving without any assistance from adults (Wertsch, 1979).

Bruner's theory of instruction is similar to Vygotsky's zone concept. Three of his benchmarks that suggest intellectual growth are

intellectual growth involves an increasing capacity to say to oneself and others by means of words or symbols what one has done or what one will do; intellectual development depends upon a systematic and contingent interaction between a tutor and a learner; and teaching is vastly facilitated by the medium of language which ends by being not only the medium for exchange but the instrument that the learner can use himself in bringing order into the environment. (Bruner, 1966, p. 6)

Bruner continues saying that the "heart of the educational process consists of providing aids and dialogues for translating experiences into more powerful systems of notation and ordering" (p. 21).

At the center of Bruner's instructional theory is the role of language and social mediation. This theory takes into account not only the "nature of knowledge but also the nature of the knower and the knowledge getting process" (1966, p. 72).

Due to the emphasis mediation plays in the role of thought and language development, the function of the teacher and/or school becomes different than is evidenced by current teaching practices. Since schools impart and function with universalist meanings, it is crucial that

teachers/schools provide an atmosphere conducive to the development of abstract thought/language. This can only be done through social dialogue. Many children still come to school needing experiences of "thinking that are promoted through dialogue" (Tough, 1983, p. 71). For one can only learn to think by thinking with labels. Teachers need to introduce dialogue. They need to be aware of the kinds of meanings individual children are representing through the use of language and to build a picture of each child's skills and difficulties through the use of language. The limited use of social discourse hinders the student's development. It is only through dialogue that children gain technical control over their language (Richards, 1978).

Not only does adult/child mediation develop abstract thought but it also establishes an atmosphere conducive for learning. Teachers and students come to school with their own agenda of prior expectations, intentions, and understandings of the environment. It is only through dialogue that a social context is established to guide the learning environment. The dialogue also minimizes the discrepancy between the activities of the child and expectations of the environment. "Teaching success requires concerted actions on the part of teachers and students to further their attainment of common knowledge

and understanding between them" (DeStafano, Pepinsky, & Sanders, 1982, p. 103). The teacher is the key to the development of the dialogue, for the teacher has to establish where the child is functioning. And, in order for the child to communicate and participate in the classroom, the teacher must first participate in the context and community of the child (Hymes, 1972). The child will be involved in the school environment if the teacher accepts the child. Without this acceptance and reciprocity, much learning is meaningless. It is critical that the teacher/mediator establishes a learning environment that is rich in social dialogue (Cazden, 1980; Clark, 1975; DeStafano, Pepinsky, & Sanders, 1982; Hymes, 1972; Wilkinson & Spinnelli, 1982; Wozniak, 1980).

Vygotsky suggests the "only good kind of instruction is that which advances ahead of development and leads it" (1978, p. 104). He suggested demonstrations, modeling, and asking leading questions as examples of mediation in the learning situation. Vygotsky was concerned with the unsuccessful student's progress. He thought these students needed extra encouragement by the teacher to learn more abstract skills as well as types of questions to ask. Without these skills, students are maintained at a low level of thought and comprehension (Camperell, 1981).

The implication of this for reading education is critical. By viewing reading as a social process, the

total reading lesson becomes important not just the content of the basal lesson. The teacher needs to establish a common base to enhance the reciprocity of the lesson. Without this, the quality of the lesson will be diminished. A child's reading performance can be affected by factors other than the actual reading activity (Bloome, 1983; Green & Smith, 1983; Markova, 1978). For example, research has shown that slower children in reading get a different lesson than the average group. With the slower child, there is little dialogue between the teacher and child and there is a concentration on the mechanics of reading. As for the more able students, there is more dialogue related to the content of the materials read (Gumprez & Hernandez-Chavez, 1972). Another current practice seen in reading groups is that the dialogue is initiated by the teacher. The dialogue is mainly teacher talk. DeStanafo, Pepinsky, and Sanders (1982) found in reading lessons that 90% of the talk was teacher initiated and 77% was simple question/answer interaction. These show little reciprocity between the teacher and students in establishing a common base for the lesson.

Some current research dealing with an interactive view of comprehension instruction is the area of reciprocal teaching based on Manzo's request procedure (1969). The basic assumption underlying this procedure is that the

effective learner engages in a systematic self-questioning and monitoring of his/her comprehension (Cole & Hall, 1982). To help teach the student how to develop these skills, the teacher will model questions before the students read the passage. The student will ask the teacher questions related to the next passage. The teacher, by modeling the appropriate behavior, helps to initiate similar responses in the student. Palinscar (1984) has successfully used this procedure with learning disabled students. Telling the students the importance of learning these strategies, Brown and Palinscar (1982) found that students had better results than when they just learned the strategy. They concluded that just training students in the strategy is inefficient and self-awareness of the strategy is necessary. A major component of all these studies is instruction aimed at the improvement of the student's self-control and awareness of the learning process (Brown, Campione, & Day, 1981).

The impact of this component of the zone of proximal development suggests a comprehension model that emphasizes a highly interactive social learning environment. Roehler, Mason, and Duffy (1984) suggest that comprehension instruction should occur within the student's zone of proximal development and instruction should move from other regulated to self-regulated within the social

instruction process. If instruction is to be within the (Zo-ped), then placement strategies have to be different to determine the student's zone of development. Placement strategies would have to give teachers the information needed to teach in the student's zone. Vygotsky's zone concept would seem to require a dynamic assessment model of placement.

In summary, regarding placement, the child's ability may well be underestimated given the nature of the current testing paradigm. A dynamic method might be more appropriate to determine reading placement as well as instructional decisions following placement. The implication of this aspect for this project is to compare the static and dynamic methodology of placement. Of interest is the efficiency of each model as regards reading placement.

Mediation and semiosis (sign systems) are the other aspects of the zone that are investigated in this research study. Given the dynamic nature of the testing paradigm, what impact does a vocabulary mediation strategy have on reading placement? How will this strategy affect comprehension of a basal story? This study is concerned with the impact of a vocabulary strategy on reading placement.

Semiosis is the third component of the zone that has implications for this study. To Vygotsky, the development

of language is synonymous to the development of thought processes in the child. Activating and extending a child's knowledge of various concepts is crucial if maximum growth is to be facilitated. Of interest is the child's facility with language concepts and the effect of the amount of knowledge on a mediated reading level.

CHAPTER III RESEARCH STUDY

The research study was conducted to determine the effectiveness of the dynamic assessment model in the placement of underachievers in reading. The main focus of this study was the effect of mediation on the students' reading placement on the Houghton Mifflin Informal Reading Inventory. The second purpose of the study was to ascertain if the students could sustain their performance when given instruction of a basal story at their static frustration level but within their emergent zone of reading performance.

Subjects

The subjects involved in the study were third grade students enrolled in an elementary school in a mid-sized community in Florida. Of the 21 subjects, 1 was an Indian, 1 was a Spanish-American, 6 were white, and 13 were black. Their ages ranged from 8 to 10 years. Eleven of the children were on free or reduced lunch. The students were included in the study because of their underachievement in reading. At the time of the study, the subjects' reading placement in the school's adopted

basal program ranged from the first grade level to the fourth grade level (see Table 3.1). The students' placements based on various achievement test scores as well as their scores on the informal reading inventory are indicated in Table 3.1. Placements based on these tests indicate both reading achievement and informal reading test scores are below grade placement. Because of the low achievement in reading, these students were enrolled in compensatory programs such as the Chapter I program, summer school, or special education classes.

Table 3.1

Basal Series and Achievement Test Placement Levels

Achievement Tests/Basal Placements	Grade Levels				
	P	1	2	3	4
Gates MacGinitie Test-- Comprehension Section	1	3	12	5	
Metropolitan Achievement Test-- Reading Subtest		1	10	7	
Houghton Mifflin Informal Reading Inventory--Static Silent Reading	4	8	6	3	
Ginn Basal Placement		1	3	15	2

Note. Three scores are missing from these data. These students were absent during the test period.

Instruments

Gates MacGinitie Reading Test

The Gates MacGinitie test was chosen to be used as a measure of general reading achievement of the subjects. The test gives a static, norm-referenced indication of the student's current reading achievement. The Gates was standardized on a population of over 100,000 students. The norming sample of the school districts considered the following variables: (a) geographic location, (b) enrollment size of the districts, (c) family income, and (d) years of schooling completed by the adult population. The categories included low-middle-high socioeconomic groups as well as Blacks and Hispanics. These racial categories were equivalent to the percentages for those groups given by the census. The Kuder-Richardson formula 20 was used to determine the reliability coefficients on the comprehension test. The coefficients ranged from .88 to .94.

Informal Reading Inventory

The informal reading inventory is an individually administered reading test. It consists of having students read increasingly more difficult passages. Each passage is followed by a series of comprehension questions. The informal reading inventory includes parallel forms of the passages to assess oral reading, silent reading, and

listening comprehension. Performance on the informal reading inventory can be translated into the frustration, independent, and instructional reading levels. These levels are determined by analyzing the student's oral reading errors and/or comprehension performance (Powell, 1974). The informal reading inventory gives a method of determining a student's reading placement.

The Houghton Mifflin Informal Reading Inventory was selected for the study because the length of the story passages are longer than those in most commercial informal reading inventories. When short oral informal reading inventory passages are used to place students, there can be a decrease in comprehension on longer basal stories (Bowden, 1978).

Both the silent and oral forms of the informal reading inventory were used in the study. The silent forms were used to determine placement of students based on their recall scores on the passages. The oral form was used to give an indication of the listening ability of the subjects. This also gives an indication of the student's potential in reading. By giving the informal reading inventory, the student's independent, instructional, and frustration levels can be obtained.

Readability of the levels was assessed by a microcomputer program developed and adapted from Scuyler (1982). See

Appendix A for the readability levels of the materials used in the study.

Procedure

The procedure section is divided into three parts. In the first part, the experimental treatment is described. In the second, the procedure for collecting the recall data is described. The third part describes the steps in carrying out the study.

Experimental Treatment

The mediation strategy used in the study emphasized a dialogue between the researcher and student. This was done to provide a meaningful context for the dynamic assessment and the basal reading lesson. The dialogue helped to provide a common base between the researcher and student for the development of the strategy. The dialogue also directed the student's attention to the focus of the mediation.

Vocabulary words and concepts were chosen to be the emphasis of the mediation with the experimental group. This was done to build a conceptual knowledge of words in the informal reading inventory passages and the basal story.

The words were chosen according to the following rationale: (a) words that seemed crucial to the theme of the story, (b) words not on Spache's list of 1041 common words for the primary level, and (c) words identified by the Houghton Mifflin or Ginn manuals as being important.

As a final check on the difficulty value of the words chosen, the Living Word Vocabulary by Dale and O'Rourke (1976) was used as a resource. See Appendix B for the list of words used in the study.

The procedure for the mediation was the following: (a) the word was read to the student both in isolation and in the context of a sentence, (b) the student first attempted a definition of the word on the context clues in the sentence, (c) the student was then guided through clues and questions to generate a discussion about the meaning of the word. The intent of the discussion was to have the students, who were at a minimal word knowledge level, develop a broader, more expansive knowledge of the word. An example of the type of mediation used in this study is given in Appendix C.

Assessment of Recall

A simple description schema was used to generate a list of recall events (McConaughy, 1980). The simple description schema offers a basic form for recalling explicitly stated events in the story. It usually includes the beginning and ending episodes such as the setting, major event of the story, and the resolution. It also includes some details of the literal events that happened in the story. The simple description schema is used to assess the completeness of the story recall at the literal

level. This schema was chosen because of the low language level and low reading achievement of the students.

Each passage had 20 recall events. Both prompted and free recall were used in the study. The student was first asked to recall the story. If the student had difficulty with the recall, two general questions were asked. If the student could not answer the question, recall and questioning for that passage or story was concluded.

Goodman's retelling comprehension scores were used to judge the quality of comprehension recall. Goodman's score of 40% and below was used as an indication of the frustration level. Comprehension scores of 40-55% were used as an indication of the instructional level. These values for comprehension recall were used throughout the study (Goodman & Burke, 1971).

Data Collection

The steps in collecting the data to test hypotheses 1 through 5 were identical except in collecting the data relevant to the first two hypotheses the students read the passages (silent reading condition) whereas in collecting data relevant to the third and fourth hypotheses the passages were read to the students (listening condition).

Initially, all students were given the Gates MacGinitie Reading Test--comprehension section and the silent and

listening forms of the Houghton Mifflin Informal Reading Inventory. These tests were given following the directions of the test explicitly. The Gates gave an indication of the static achievement level of the students. Likewise, the informal reading inventory was administered to give an indication of the static placement levels of the students. During this assessment it was determined that silent passages at the third and fourth grade were at the students' frustration reading level. Listening passages at the fourth and fifth grade were at the student's frustration level. In the subsequent paragraphs the static reading and listening tests will be referred to as reading and listening pretests. Students were randomly assigned to the experimental and control groups after the assessments were completed.

The experimental group received the vocabulary mediation treatment, as described above and illustrated in Appendix C, prior to the silent reading of the third and fourth grade passages. The students read the passage once. Oral retelling followed the reading of the passage. The experimental group students also received the mediation prior to listening to the story once and recall was assessed immediately following one listening of the passage. The control group received no mediation. They read the third and fourth grade passages twice (repeated reading). The

students read the passage twice to give equal exposure of the passage to the control group. This was done to roughly equalize the amount of exposure to the key vocabulary words in the passage. Recall was assessed following the second reading of a passage. The control group listened to the fourth and fifth grade passages twice. Recall was assessed after the second reading of a passage. Recall was assessed after a student listened to a passage the second time. The recall scores from this phase of the study will be called reading and listening posttest scores.

Following the various placement assessments, all students were exposed to a directed reading lesson. A basal story at the 4.3 grade level was used in the instruction. The control group received a directed reading lesson following the directions in the teacher's manual as explicitly as possible. The story was read once. Comprehension was assessed following the reading of the story by free and prompted recall.

The experimental group received a mediated reading lesson. The directions in the teacher's manual were followed. Only the students were guided through a discussion and given support to draw conclusions at each step of the reading lesson. The mediation was a dialogue similar to the procedure used in the mediation for hypotheses 1 through 4.

Method of Analysis

The analysis of covariance (ANCOVA) was chosen as the method of statistical analysis for the study. In testing hypotheses 1 and 2, the students' reading pretest scores were used as the covariates. The reading posttest scores were used as the dependent variables. Separate ANCOVA analyses were conducted for the third and fourth grade passages.

In testing hypotheses 3 and 4, the students' listening pretest scores were used as the covariates. The listening posttest scores were used as the dependent variables. Separate ANCOVA analyses were conducted for the fourth and fifth grade passages.

In testing hypothesis 5, the ANCOVA was also used. The raw score on the Gates was used as the covariate for this analysis. The raw score on the recall measure of the Ginn story was the dependent variable.

CHAPTER IV ANALYSIS OF DATA

The major purpose of the study was to investigate whether or not the placement of students in the traditional reading levels, i.e., the instructional, independent, and frustration levels, could be modified by a mediated testing paradigm. The second purpose was to investigate whether or not students could benefit from mediated instruction in a basal story at their static frustration level.

The results of the analysis relevant to each hypothesis are given first. After this, a description of the observations gathered throughout the study is presented. The final section is a discussion of these findings as they pertain to the theoretical base of the study.

Comprehension was assessed by story recall. Each third through fifth grade passage had a total of 20 events to assess the completeness of the story recall. The total number of recall units at each level was used for the statistical analysis of the project.

The analysis of covariance was used for the statistical testing of each hypothesis. The analysis of covariance

first tested for an interaction between the treatment (mediation) and the independent variable (comprehension posttest score). At each level of analysis the interaction effect was nonsignificant at the .05 level. This indicates that the treatment did not have a greater effect for students at the various comprehension levels. Therefore, no further analysis was needed to study the interaction effect. The next analysis was used to determine the statistical significance of the adjusted mean difference between the experimental and control groups at each passage level. This was used to study the treatment effect of the mediation on the experimental group. A .05 level was used to test the significance of each hypothesis.

Results of the Hypotheses Tests

Hypothesis I

After reading a third-grade informal reading inventory passage, there will be no difference in the average number of story events recalled by the experimental and control groups.

Results

As indicated by Table 4.1, the mean scores on the posttest measure was 8.54 for the experimental group and 7.1 for the control group. The percent correct for the experimental group was within the instructional range. The other scores indicate the frustration range.

Table 4.1

Mean Recall Performance Scores of Students on the
Silent IRI Passage, Level 3

Condition	Group	N	\bar{X}	SD	% Correct
Pretest	E	11	4.81	5.19	24%
Posttest	E	10	8.54	5.50	42%
Pretest	C	10	6.30	5.92	21%
Posttest	C	10	7.10	5.42	31%

The adjusted mean score was 9.1 for the experimental group and the score was 6.4 for the control group. As the results show in Table 4.2, there was a significant difference between the mediated and nonmediated group on the recall measure. The mediated assessment strategy was effective in increasing the mean number of story events recalled by the experimental group on this third-grade passage.

Table 4.3 contains the results of the level 3 testing on the informal reading inventory. This table shows that, in addition to overall mean differences in performance on the informal reading inventory passage, more students in the experimental group also increased their placement classifications. Based on the comprehension posttest scores, the following changes in reading placement were

Table 4.2

Comparison of Mediated and Nonmediated Posttest Scores, Silent IRI Passage, Level 3

Adjusted Mean Scores		Standard Error of Adjusted Mean Difference	t	p
E	C			
9.181	6.400	.99	2.79	.0122

Table 4.3

Placement Levels on Silent IRI Passage, Level 3

	Frustration	Instructional	Independent
Pretest			
Experimental	7	2	2
Control	5	3	2
Posttest			
Experimental	6	1	4
Control	4	5	1

indicated. Four students in the experimental group changed reading placement from the pretest to the posttest measure. Two students changed from the instructional to the independent level and one student changed from the frustration to the instructional level. In the control group, only two students changed placements. One student changed from the frustration level to the instructional level. The other changed from the instructional to the independent level.

Hypothesis II

After reading a fourth-grade informal reading inventory passage, there will be no difference in the average number of story events recalled by the experimental and control groups.

Results

The mean score on the posttest measure was 6.36 for the experimental group and 4.30 for the control group. The percent correct for both groups was in the frustration range (see Table 4.4).

While there was an adjusted mean score difference on the posttest measure (experimental 6.58, control 4.05), there was no significant difference between the performance of the experimental and control groups on the recall measure (see Table 4.5). Even given the mediation, the passage proved too difficult for the experimental group.

Table 4.4

Mean Recall Performance Scores of Students on the
Silent IRI Reading Passage, Level 4

Condition	Group	N	\bar{X}	SD	% Correct
Pretest	E	11	4.09	5.37	20%
Posttest	E	11	6.36	6.72	31%
Pretest	C	10	4.60	6.16	23%
Posttest	C	10	4.30	5.98	21%

Table 4.5

Comparison of Mediated and Nonmediated Posttest
Scores, Silent IRI Passage, Level 4

Adjusted Mean Scores		Standard Error of Adjusted Mean Difference	t	p
E	C			
6.585	4.05	1.61	1.57	.1335

Table 4.6 shows the test results of the level 4 informal reading inventory passage. At this level, there were several changes in both the experimental and control groups on the posttest measure. Six students in the experimental group had a change to a higher level on the posttest measure. Two students in the control group changed to a higher level on the posttest measure. The other students stayed at the same level of placement.

Table 4.6

Placement Levels on Silent IRI Passage, Level 4

	Frustration	Instructional	Independent
Pretest			
Experimental	7	2	2
Control	7	2	1
Posttest			
Experimental	5	2	4
Control	5	3	2

Hypothesis III

After listening to a fourt-grade informal reading inventory passage, there will be no difference in the average number of story events recalled by the experimental and control groups.

Results

The mean score on the posttest measure was 9.54 for the experimental group and 4.70 for the control group. The percent correct for the experimental group on the posttest measure was in the instructional range. The score on the posttest for the control group was in the frustration range (see Table 4.7).

Table 4.7

Mean Recall Performance Scores of Students on the Listening IRI Passage, Level 4

Condition	Group	N	\bar{X}	SD	% Correct
Pretest	E	11	5.45	5.820	27%
Posttest	E	11	9.54	4.186	48%
Pretest	C	10	3.40	4.780	17%
Posttest	C	10	4.70	5.370	23%

At this level, the adjusted mean number of recall units on the posttest for the experimental group was 9.00 and for the control group 5.29. There was a significant difference on this level of testing. The mediation was effective in increasing the mean number of story events recalled from this passage for the experimental group. See Table 4.8.

Table 4.8

Comparison of Mediated and Nonmediated Posttest Scores, Listening IRI Passage, Level 4

Adjusted Mean Scores		Standard Error of Adjusted Mean Difference	t	p
E	C			
9.00	5.29	1.72	2.16	.044

Table 4.9 indicates the results of the level 4 listening passage. Four students in the experimental group shifted from the frustration level to the instructional level on the posttest measure. Two students in the control group had a change of placement on the posttest measure.

Table 4.9

Placement Levels on Listening IRI Passage, Level 4

	Frustration	Instructional	Independent
Pretest			
Experimental	6	4	1
Control	7	3	0
Posttest			
Experimental	2	6	3
Control	6	4	0

Hypothesis IV

After listening to a fifth-grade informal reading inventory passage, there will be no difference in the average number of story events recalled by the experimental and control groups.

Results

At this level, the mean score on the posttest measure was 8.63 for the experimental group and 2.30 for the control group (see Table 4.10). The experimental group scores was within the instructional range. The control group score was in the frustration range.

Table 4.10

Mean Recall Performance Scores of Students on the Listening IRI Passage, Level 5

Condition	Group	N	\bar{X}	SD	% Correct
Pretest	E	11	1.18	3.91	6%
Posttest	E	11	8.63	7.25	43%
Pretest	C	10	2.00	4.61	10%
Posttest	C	10	2.30	4.85	11%

For this passage, the adjusted mean number of recall units for the experimental group was 8.97 and the adjusted mean number of recall units for the control group was 1.92. There was a significant difference between the mediated and nonmediated group on the recall measure (see Table 4.11). The mediation was effective in increasing the number of recalled story events from this listening passage for the experimental group.

Table 4.11

Comparison of Mediated and Nonmediated Posttest Scores, Listening IRI Passage, Level 5

Adjusted Mean Score		Standard Error of Adjusted Mean Difference	t	p
E	C			
8.97	1.92	2.25	3.12	.0059

As shown in Table 4.12, there were three students (one experimental and two control) who scored at the instructional level with the static assessment. Following the mediation, five students in the experimental group were at the independent level and one student was at the instructional level. The control group had two students at the instructional level and one student at the independent level.

Table 4.12

Placement Levels on Listening IRI Passage, Level 5

	Frustration	Instructional	Independent
Pretest			
Experimental	10	1	0
Control	8	0	2
Posttest			
Experimental	5	5	1
Control	7	2	1

Hypothesis V

After reading a fourth grade basal story, there will be no difference in the average number of story events recalled by the experimental and control groups.

Results

The mean score on the posttest measure was 9.6 for the experimental group and 5.1 for the control group. The percent correct for the experimental group was within the instructional range while the control group's score was in the frustration range (refer to Table 4.13).

As shown in Table 4.14, the adjusted mean score for the experimental group was 9.5 and for the control group 5.24. There was a significant difference between these

Table 4.13

Mean Recall Performance Scores of Students on the
Ginn Level 4 Basal Story

Group	N	\bar{X}	SD	% Correct
E	11	9.63	3.41	47%
C	10	5.10	2.76	25%

Table 4.14

Comparison of Mediated and Nonmediated Posttest
Scores, Level 4 Basal Story

Adjusted Mean Score		Standard Error of Adjusted Mean Difference	t	p
E	C			
9.50	5.24	1.25	3.41	.0032

groups on the recall measure. The mediated directed reading lesson was effective in increasing the number of story events recalled on the posttest measure.

Table 4.15 contains the results of the basal story testing. After one silent reading of the story, nine students in the experimental group could be placed in the instructional or independent range. Two students in the control group could be placed in this range.

Table 4.15

Placement Levels on Level 4 Basal Story

	Frustration	Instructional	Independent
Posttest			
Experimental	2	6	3
Control	8	2	0

Summary of Results of Hypotheses Tested

In general, the results indicated the mediation was effective in increasing the number of recalled story events for the experimental group. Four of the five proposed hypotheses were rejected at the .05 level of significance. The vocabulary mediation facilitated the comprehension process on both the informal reading inventory passages and the basal story. The impact of this was to bring about

higher reading placements for the experimental group. Following the mediation, seven of the experimental group could have been placed in a fourth grade book rather than a third grade book as indicated by the static pretests. The study does show that students can function in materials that are considered too difficult for them.

While the mediation was effective in creating a significant difference between the groups on most of the informal passages, it was not effective on the fourth grade silent informal reading inventory passage. The experimental group recalled, on the average, two more units than the control group. This was not enough to create a statistical difference between the two groups. However, these same students performed well on the fourth grade basal story. The experimental group recalled an average of nine units to the control group's five units. The more structured mediation of the basal lesson was quite effective in facilitating the comprehension process for the basal story. The treatment signifies that the students in the experimental group can recall up to 70% comprehension after one reading of a story at their frustration level.

While repeated reading does have a history of being effective in increasing comprehension, it did not significantly affect the control group's performance on these passages. However, the rereading did create a slight increase in the

comprehension posttest score of some of the control group subjects. This, in turn, narrowed the score difference between the two groups. There would have been a greater difference between the groups had the control group been exposed to another activity rather than repeated reading.

Observations

The observations gleaned throughout the study were informative and enlightening. The observation findings are grouped along the following areas: general observations, listening behavior, comprehension performance, reading behavior, and conceptual level of language.

The students involved in the study were all underachievers in reading. The students were very low risk takers. If the student did not know a word, most would sit or randomly guess at the word. Most did not apply any knowledge of letter sounds in their attempt at generating any words. They also examined the length of the story and the number of pictures to determine whether or not the story was too hard to read before actually attempting to read the passage. For example, one boy, on seeing the silent fourth grade level passage of the informal reading inventory, said that it was too hard before really attempting to read it. Once his assessment period was over, he read and discussed each sentence. Then he and the teacher discussed the paragraph.

He sheepishly grinned and acknowledged that it was not that hard after all. The self-fulfilling prophecy of failure was engrained in most of these students.

The students also had lowered expectations of themselves as learners. Students sometimes showed anger when asked to read beyond the second informal passage. The students seemed to have a fixed negative view of themselves as learners. They were not going to attempt to read more than they felt was sufficient for them. This was even true if they were successful with the task. They kept limiting themselves in their achievement.

These behaviors, irrationality and impatience, greatly interfered with the test and subsequent comprehension performance. The students were moody and let a whole host of behaviors interfere with their school performance.

The level of listening ability was low. Some of this is possibly due to the fact they have little chance to listen and give back information. The students sat quietly appearing to listen intently. However, many could not do the story recall. Some of the students were actively listening. They would laugh at various parts or their facial expressions would change at different parts of the passage. Their story recall was usually higher than the others.

By these observations, students need to be taught active listening. If the students were not listening well in a one-to-one situation, then listening skills were worse in a group situation. Consequently, their learning and comprehension performances were greatly impaired. These students have learned to sit and appear to listen but they were not attending to the task.

During the act of reading the story, most students did some kind of subvocalization. There was a great deal of lip movement, whispering, and finger movement while they read. Students at the independent level did little vocalization, no tracking of the words with fingers, and eye movements were consistent with fluent reading. Students at the instructional level (or more difficult level) would whisper, have finger movements, and stop to reread a sentence. These students were actually working with the text. Students at the true frustration level would not read, or they would exhibit fluent fast "reading." During the project, however, students receiving the mediation did less vocalization. There was some lip movement or tracking with their hands but they could read the passage with less overt behavior.

As with the reading behavior, there were various levels of comprehension recall. Using materials at the independent level, the student could recall almost

flawlessly the story content. The sequencing of the story events was good. The student would start with a general main idea statement then would proceed with the recall. Recall with materials at the instructional level was good. However, there were more substitutions of words and the sequencing of events was sometimes out of order. With materials that were too difficult, the sequence of events was completely out of order. Some students would start the recall, then generate their own story using some of the vocabulary of the passage.

In general, with materials too difficult, rereading the passage did not improve the story recall. The sheer repetition did not greatly facilitate comprehension.

Also, the prompting of recall did not generate more statements about the story. The students seemed to tell what they knew on the first recall. Only with the shy child did the prompting help.

These students also showed context dependent, narrow word knowledge. Most definitions contained the word itself. Or the students gave a concrete example of the word. One student giving the definition of "scribbled" moved his finger on the desk in a scribbling motion. It was difficult for the students to build relationships to enable them to have a broader understanding of the words. The students needed more exposure to the words to have the concepts firmly in mind before reading the passage.

Discussion

In general, the students in the experimental group had a higher number of recall events on the frustration level passages. This supports the theory of the dynamic assessment model that students can perform better with mediation. As with Feuerstein's (1980) work, these students exhibited impulsive, inattentive, and other negative behaviors that impede the assessment and learning process. They also exhibited few analytical thinking/reading processes. It was hard for them to generalize, conceptualize, and categorize information to adequately process and recall the text. The combination of the undeveloped thought processes and immature behavior makes learning and assessment difficult. When engaging these students in a dialogue, the dynamic assessment paradigm helped to overcome some of these problem areas by focusing the student's attention to the learning task. By centering the attention on the task, an attempt was made to broaden and develop the student's thought processes as well as monitor the impulsive behavior of the students. In developing the mediation, the students were able to read and comprehend more difficult material than traditionally expected.

The findings of the study support Vygotsky's (1981c) three-step assessment model. First, a static assessment

must be made to have an indication of the student's current achievement. Then, a mediated assessment is needed to determine the student's potential. After a training period, a third assessment is given statically at this higher level of achievement. Those students ready for this higher level will perform well on this third testing. Most of the students in the experimental group performed extremely well on this third test. The recall scores went up 15-30% on this last assessment. The few that did not show growth were not ready for instruction at this higher level. The mediation, along with the rereading of the passage, did increase the student's level of recall of the various passages.

Taken together, the dynamic assessment and Vygotsky's test procedure, the study supports Vygotsky's zone of proximal development. The students in the experimental group performed well on the posttest measures that traditionally would be considered too difficult. By not encouraging and supporting more growth, students are placed at lower reading levels. With appropriate assessment techniques and mediation, students can function at higher reading levels. The study does support both a mediated testing paradigm and the zone of proximal development.

The student confirmed rather vividly the effects of low conceptual word knowledge on the reading achievement of

low SES students. These students had very minimal knowledge of words. This left them with limited word usage skills. Some students could generate a sentence with the target word but they were unable to give synonyms or antonyms. They had difficulty in building these various word relationships. Consequently, their comprehension performance was hindered. These students need a great deal of exposure to and dialogue about words to gain the facility needed to be successful in reading.

This study supports the concept of social dialogue as an effective means of instruction. While the students needed more dialogue to firmly grasp the word meanings, the dialogue gave a good indication of the types and amount of support a student needs to learn words well enough to facilitate the comprehension process. The dialogue was effective because the students were actively involved in the learning process. By asking questions and responding to their comments, students became engaged in the conversation in order to respond to and maintain the dialogue. They became part of the socially shared meaning structure that enables one to effectively communicate. This approach, social dialogue, presents a positive way to promote more growth in students.

As indicated by the study, the level of involvement of the students in the educational process seems to be

somewhat limited. Students are passively involved in their schooling. For more reading growth, students need to be more actively involved in the whole process from pre-placement assessment through the post-reading comprehension assessment. The teacher/mediator needs to be the instigator of learning and guiding the students to reach their fullest potential.

In conclusion, the results of the study not only support Vygotsky's (1981c) and Feuerstein's (1980) testing models, they support a concept of viewing reading assessment and reading lessons in a social dialogue framework. They also raise the question about the level of the children's activity in the educational process. There is a passive model of education currently seen in many areas. This project indicates the importance of dialogue and student engagement in a task to achieve the maximum growth in the reading process.

CHAPTER V
SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

Summary

The assessment and placement of students in instructionally appropriate materials is a perennial concern for elementary educators. The concern is one of placing students in materials at appropriate levels where maximum reading growth is fostered. Placement in materials too difficult will only create frustration and little positive learning will take place. Placement in materials that are too easy will provide practice but, again, reading growth will not be promoted. Placement in books needs to be at levels where reading growth will be maximized.

Among the procedures currently used for reading placement are the informal reading inventory, basal placement tests, and standardized achievement tests. Each uses the static paradigm, a paradigm where a student's level of functioning is determined independently of any social interaction between the student and teacher. These tests provide an objective measurement of the student's performance in the tests. The student is

allowed no aids or support throughout the testing period. These static tests, while useful for measuring what students can read and understand without support, do not indicate what students can do with teacher support. Also, with the static paradigm, no information is obtained regarding the amount or type of instruction needed to support adequate reading progress within the context of a reading lesson.

Due to the placement methodology, students might be improperly placed in their reading books. The use of the static paradigm may be misleading in prescribing students' reading placement.

The focus of this study was on reading placement using the dynamic paradigm, a paradigm based on a social interaction model between the teacher, the students, and the test. In this paradigm, the adult monitors and gives aid as needed throughout the test. This paradigm treats reading assessment in a social setting similar to the context of a reading lesson. Reading assessment is not a single, discrete measure of the student's reading behavior. The impact of background knowledge, mediation, and other aspects of the reading process on students' reading behavior can be analyzed with this paradigm. Because of the contextual approach of this paradigm, placement decisions may be affected. It seems logical to expect

higher reading placements using the dynamic assessment paradigm rather than the static assessment paradigm.

The dynamic assessment and consequent higher reading placement might be especially beneficial for low achieving students. Due to the traditional placement method and current educational practices, low socioeconomic students who are underachieving in reading are maintained at a low conceptual development. Consequently, reading progress is somewhat limited. The dynamic assessment might place these students at a higher level of reading placement. The mediational aspect of this model would give the teacher information on planning a reading program to provide more rapid growth in reading. The dynamic paradigm would allow educators to see if low SES underachievers can function with challenging reading materials and profit with materials closer to their static frustration level.

The purpose of this study was twofold. One major purpose was to investigate whether a dynamic paradigm reading assessment strategy results in higher levels of performance than a static paradigm. Informal reading and listening passages were used for this purpose. The second purpose was to ascertain whether students could benefit from instruction in a basal story at a higher level of difficulty than would normally be indicated by the assessment using the static paradigm.

The essence of the study was to compare the performance of an experimental group and a control group. All students (a) silently read a third and fourth grade informal reading inventory passage, (b) listened to a fourth and fifth grade informal reading passage, and (c) were instructed using a fourth grade basal story. In each activity, the experimental group was exposed to a treatment based on the dynamic paradigm. The control group received a treatment based on the static paradigm.

Given these purposes, the research study contained the following hypotheses:

1. After reading a third grade informal reading inventory passage, there will be no difference in the average number of story events recalled by the experimental and control groups.
2. After reading a fourth grade informal reading inventory passage, there will be no difference in the average number of story events recalled by the experimental and control groups.
3. After listening to a fourth grade informal reading passage, there will be no difference in the average number of story events recalled by the experimental and control groups.
4. After listening to a fifth grade informal reading inventory passage, there will be no difference in the

average number of story events recalled by the experimental and control groups.

5. After reading a fourth grade basal story, there will be no difference in the average number of story events recalled by the experimental and control groups.

Procedure

The basic design of the study was the pretest-posttest randomized groups design. The subjects were summer school and Chapter I third grade students enrolled in a local elementary school. The students were included in the study because of their underachievement in reading.

Experimental treatment. The mediation strategy used in the study emphasized a dialogue between the researcher and the students. This was done to provide a meaningful context for the dynamic assessment and the basal reading lesson.

Vocabulary words and concepts were chosen to be the emphasis of the mediation with the experimental group. This was done to build a conceptual knowledge of words in the informal reading inventory and the basal story.

The words were chosen because they (a) seemed crucial to the theme of the passage or story, (b) were identified in the manual as being important, or (c) were computer-generated words not found on Spache's list of common words for the primary level.

The procedure for the mediation was the following:
(a) word was read to the student both in isolation and context of a sentence, (b) student attempted a definition of the word based on the context clues of the sentence, and (c) the student was then guided through clues and questions to generate a discussion about the meaning of the words.

Assessment of recall. A simple description scheme was used to generate a list of recall events (McConaughy, 1980). This schema offers a basic form for recalling explicitly stated events in the story. It includes not only the beginning and ending story episodes, major event, and resolution, but also some story details. It is used to assess the completeness of the story recall at the literal level.

Each passage had 20 recall units. Both prompted and free recall were used in the study.

Goodman's retelling comprehension scores were used to judge the quality of story recall. Goodman's score of 40% and below was used as an indication of the frustration level. Comprehension scores of 40-55% were used as an indication of the instructional level. These values for comprehension recall were used throughout the study (Goodman & Burke, 1971).

Data collection. Initially, all students were given the comprehension section of the Gates MacGinitie Reading

Test and the silent and listening forms of the Houghton-Mifflin Informal Reading Inventory. These tests were given statically. The Gates gave an indication of the current achievement level of students. The informal reading inventory gave an indication of the static placement levels of the students. Students were randomly assigned to the experimental and control groups after the assessments were completed.

The experimental group received the vocabulary mediation treatment prior to the silent reading of the third- and fourth-grade passage. The students read the passages once. Oral retelling following the reading of the passage. The experimental group students also received the mediation prior to listening to the story once and recall was assessed immediately following one listening to the passage. The control group received no mediation. They read the third- and fourth-grade passages twice (repeated reading). The students read the passage twice to give equal exposure of the passage to the control group. This was done to offset the treatment of the experimental group. Recall was assessed following the second reading of a passage. The control group listened to the fourth- and fifth-grade passages twice. Recall was assessed after the second reading of a passage. The recall scores from this phase of the study will be called reading and listening posttest scores.

Following the various placement assessments, all students were exposed to a directed reading lesson. A basal story at the 4.3 grade level was used in the instruction. The control group received a directed reading lesson following the direction in the teacher's manual as explicitly as possible. The story was read once. Comprehension was assessed following the reading of the story by a free and prompted recall.

The experimental group received a mediated reading lesson. The directions in the teacher's manual were followed. In addition, the students were guided through a discussion and given support to draw conclusions at each step of the reading lesson. The mediation was a dialogue similar to the procedure used in the mediation for the placement assessments.

Results

After collecting the data of the study, the analysis of covariance was used to determine the statistical significance of each hypothesis. The analysis of covariance first tested for an interaction between the treatment (mediation) and the dependent variable (comprehension posttest score). At each passage level, the interaction effect was nonsignificant. This indicates that the treatment did not make a greater effect for a certain group of students. Therefore, no further analyses were conducted to study the interaction effect.

The next analysis was used to determine the statistical significance of the adjusted mean score for the group assignment at each passage level. This was to study the treatment effect of the mediation on the experimental group.

There was a statistically significant difference between the experimental and control groups on four of the five hypotheses. The experimental group recalled more units on the level three silent informal passage than the control group. There was a significant difference between the adjusted means with a $t(2,18)=2.19$, $p < .05$.

The ANCOVA on the adjusted mean score of the level four silent informal inventory showed no significant difference between the groups, $t(2,18)=1.57$, $p > .05$. Therefore, the null hypothesis was not rejected. The mediation was not effective in increasing the recalled story units for the experimental group.

At both levels of the listening informal reading inventory, the experimental group recalled more story units than the control group. There was a significant difference between the mediated and nonmediated groups: Level 4 - $t(2,18)=2.16$, $p < .05$; Level 5 - $t(2,18)=3.12$, $p < .05$. In addition to the overall mean difference in the performance on the passages, more students in the experimental group increased their placement classifications at each level of the informal reading inventory.

The ANCOVA on the adjusted mean score on the level four basal story showed a significant difference between the experimental and control groups on the recall measure $t(2,18)=3.41$, $p < .05$. The mediated directed reading lesson was effective in increasing the number of story events recalled on the posttest measure. After one silent reading of the story, 10 students in the experimental group could be placed in the instructional or independent range. Two students in the control group could be placed in this range.

In general, the results indicate that the mediation was effective in increasing the number of recalled story events for the experimental group. Four of the five proposed hypotheses were rejected. The vocabulary mediation facilitated the comprehension process on both the informal reading inventory passages and the basal story. The impact of this was to bring about higher reading placements for the experimental group. Following the mediation, seven of the experimental group students could have been placed in a fourth grade book rather than a third grade book as indicated by the static pretests. The study does show that students can function in materials that are considered too difficult for them.

While the mediation was effective in creating a significant difference between the groups on most of the

informal passages, it was not effective on the fourth grade silent informal reading inventory passage. The experimental group recalled on the average two more units than the control group. This was not enough to create a statistical difference between the two groups.

However, the students in the experimental group performed well on the fourth grade basal story. The experimental group recalled an average of nine units to the control group's five units. The more structured mediation of the basal lesson was quite effective in facilitating the comprehension process for the basal story. The treatment signified that the students in the experimental group can recall up to 70% comprehension after one reading of a story at their frustration level.

While repeated reading does have a history of being effective in increasing comprehension, it did not significantly affect the control group's performance on these passages. However, the rereading did create a slight increase in the comprehension posttest score of some of the control group subjects. This in turn narrowed the score difference between the two groups. There would have been a greater difference between the groups had the control group been exposed to another activity rather than repeated reading.

Conclusions

The concepts of the dynamic assessment paradigm and Vygotsky's zone of proximal development are viable constructs for the placement of students in reading books. Both emphasize the potentiality of the student's reading growth.

The dynamic methodology allows not only for higher reading placement but more information is gained about the student's reading and testing behaviors. By focusing on test behaviors and results rather than just the test scores, a better program of reading instruction can be developed.

Students participating in the study exhibited a variety of skills that impeded the assessment period as well as the learning to read process. These students need to develop a variety of skills to adequately learn to take tests in a static paradigm. They need to think about the test items. They also need to analyze why they chose certain answers. Most of these students just react to the items instead of thinking about the test item. The dynamic assessment provides an opportunity for students to learn appropriate test taking behaviors.

The zone of proximal development is a useful construct in that it allows not only for teaching to be the leading edge of the student's growth, but it presents a base to

re-orient teaching practices. The zone allows for the students' growth to be maximized by having a more active support system by the teacher. At the beginning, the teacher may provide most of the support, but the students are encouraged to become self-learners. The teacher can guide and encourage the students' growth by modeling the behavior, asking leading questions, and engaging the students in dialogue. The key to the effectiveness of the zone concept, however, is the support of the teacher and the engagement of the children in the reading activity through dialogue.

The mediation/social dialogue learning environment presents a positive approach to the teaching of reading. The mediation is critical. It is through the use of language that thought development is facilitated. The students in this study needed a great deal of dialogue to become more adept at using the language system that is needed to succeed in the process of learning to read. The students had minimal knowledge of the language code. Consequently, not only was reading growth limited but their thought processes were underdeveloped. While the student's conceptual level of words did not progress to a broader, more abstract level, the exposure through dialogue increased familiarity of the words enough for comprehension to be increased.

The mediation was effective also because many very overt behaviors of reading, such as whispering, decreased after the mediation. The mediation helped the students read more smoothly.

The observations gleaned during the study underlined the need to reexamine the level of children's activity in the reading process. These students were passive learners. They waited for every direction, took few risks, and limited their achievement. They seemed to focus on the correctness of their responses. Rarely did the students become truly involved in the process of learning to read.

In conclusion, the study's results and observations support both the dynamic assessment paradigm and the zone of proximal development. After the mediation of the dynamic assessment, the experimental group recalled more story units and had higher reading placements on the informal passages than the control group. Following the mediated reading lesson, the experimental group also recalled more story units on the basal story than the control group. Given mediation, these underachieving students can function with higher level materials than otherwise expected. The project indicates the importance of dialogue and students' engagement in the assessment/reading task to achieve the maximum growth in the learning to read process.

Implications

The implications of the study are many yet most are not difficult to achieve. The most challenging will be a change in perspective regarding many current testing and teaching practices.

A major implication of the study is a shift to a more process-oriented approach to testing. While an indication of a student's independent reading ability is important, more assessment information is needed to adequately plan a reading program. The dynamic assessment paradigm offers an opportunity to have knowledge of the student's independent reading level as well as information regarding the potential reading growth of the student. As used in this study, the dynamic assessment paradigm showed that students could be placed in books nine months to one year above static placement. The dynamic assessment period took somewhat longer than the static assessment period. However, the information gained from the dynamic testing was worth the extra time. The dynamic paradigm is particularly useful for the low SES, underachieving student. The paradigm not only placed these students at a higher reading level but it also gave an idea of the impact of the student's word knowledge on comprehension performance.

Another implication would be to let students analyze their test responses once the results have been obtained.

The students could be asked why they answered incorrectly. By allowing students to do this, test results become more meaningful. This activity can be used to determine what type of reading program is needed. This information can be used to make any necessary changes in the test. The wrong response could be due to a variety of factors. This is one way to actually determine the cause of the wrong response.

Letting teachers administer and analyze test results would be another change. In many cases, classroom teachers do not administer basal level mastery or placement tests. This denies a teacher a wealth of information. While teachers administer standardized achievement tests, it is machine scored. The teachers receive only the results. Without an item analysis, these tests are useless for educational planning. If these tests are going to be more helpful, then teachers need to be more involved in analyzing students' responses.

While not directly related to the dynamic assessment paradigm, test makers need to develop a variety of tests that are more appropriate for the various groups within the school population. Many students may not know what a farm is but could deal with other themes. Item banks could be developed with various themes. Schools could request more tailor-made versions of a test.

Taken together, these and other changes would result in a more process-oriented approach to assessment. The test paradigm needs to allow a teacher to analyze the behavior of students along with the test results. Without some changes, test information will always be of limited use.

Other implications are concerned with classroom practices as they related to the teaching of reading and the use of language in the classroom.

These students had minimal word knowledge. It was difficult for them to be engaged in a dialogue about many of the words used in the study. While they needed more contact with the words, the mediation was effective in increasing comprehension scores on the posttest measures. The mediation made it possible for students to read and comprehend materials at a higher reading level than the static pretests indicated. Because of the impact of vocabulary mediation on reading comprehension it is clear that students need to be engaged in more dialogue. Students should talk about a variety of daily experiences. However, they need to talk about what they are doing in school and why they are involved in various activities. Asking students to explain different processes, to categorize and explain rationale for their answers not only involves the students in dialogue but also facilitates language and thought development.

Students should be encouraged to be more specific as regards language labels. Some students need to learn broader terms for various concepts. Other students use pronouns (this, that) and have a fuzzy notion of the referents of these terms. Teachers need to make certain students are aware of these labels and their referents.

Another way to develop more dialogue as well as encourage thinking processes is to have students teach and explain directions to one another. Letting students explain how to do a task allows them to clarify their own language. It also gives the teacher an indication of how well students understand various concepts.

In general, an implication of the study is a need for more genuine dialogue in class for these underachievers to become adept language users. The dialogue needs to deal with concepts and other higher order processes, not the usual question/answer drill.

The last area deals with reading placement and subsequent teaching practices. Since the mediation was effective in increasing comprehension of the passages, the most obvious implication is to place students in higher level books. However, this is dependent on the amount of teacher support and mediation given in the test and reading lesson. If mediation is given during the test, then a mediated reading lesson at a higher placement level needs to follow. However, if students are given no support through the tests, then

lower placements are indicated. Placement of students at higher levels is dependent on a social framework support system between the teacher and students.

Teachers may need to place students in more groups rather than less. Currently, teachers are encouraged to have three reading groups. In order to do this, two groups are collapsed into one. Placement will be at a lower level book to accommodate the lower students. The higher functioning students will be placed in books that are too easy.

Another implication would be to analyze the materials used to teach reading to students. Some basals have stories of limited interest and/or content. There is little in these stories to generate any discussion between the teacher and students. This means supplementing the basal series with other more challenging, interesting materials. The areas of literature, science, social studies can be used. This not only gives students exposure to a variety of topics but it gives them something to read, think about, and learn. By using these materials students can see a variety of purposes for learning to read.

Since the vocabulary strategy was effective in increasing comprehension of basal story at student's frustration level, a change in the teaching of vocabulary in the reading lesson is indicated by the results of the

study. Teachers need to assess students' knowledge of words before vocabulary instruction is begun. If students have a lot of knowledge about the words in the story, little needs to be taught. However, if students have little word knowledge then more needs to be taught.

Another implication of the study is to analyze the level of word knowledge students are expected to know in order to be successful in learning to read. Students should be able to use words in a variety of ways, i.e., analogies, synonyms, and antonyms. By teaching and requiring only definitions, students' knowledge and facility of words becomes limited. Vocabulary and language development should go beyond this minimal level.

Developing a variety of mediational strategies to teach reading is another implication of the study. Some students need more support in word analysis. Others need help with the terminology used to teach reading. Still others need support with vocabulary. Currently, reading is taught similarly for all students regardless of the need. The process is slowed down for underachievers. Students who are achieving well in reading are paced faster through the basals. But the techniques of teaching reading are not changed to accommodate the specific needs of the students.

Given the importance of dialogue, comprehension assessment of reading materials needs to be more of a

discussion rather than just simple questions about the details of the story. Discussion should include various areas such as purposes, themes, motives, and causality. Having students write about the story will also develop the comprehension process.

More implications might be generated in each area. However, based on the results of the study, some of these implications need to be considered to create a challenging, rewarding social context for reading growth to be enhanced in underachieving students.

Recommendations

While the study supported the constructs of the dynamic assessment model and the zone of proximal development, several recommendations are suggested for further research.

Some recommendations are in the area of research procedures. Counterbalancing the control and experimental groups on the various passages would have given more information about and support for the mediation strategy. Having another researcher collect the data might have eliminated any researcher interference. Both of these steps would have increased the sample size. A more ethnographic approach would be beneficial. A great deal of information can be overlooked in experimental studies. Many educationally significant contributions are neglected

when only looking for statistical significance. When combining research paradigms, educational significance will not be overlooked in the process of determining statistical significance.

Another recommendation would be in the area of materials and strategies used in the study. Designing a mediation strategy dealing with background knowledge could be one area of change. Mediation based on the impulsive, irrational testing behavior of students might be another area. Using materials other than narrative would provide a different idea of reading placements. Using a strategy similar to one of a reading lesson might have resulted in higher reading placements.

Having a different schema for assessing recall would have been more informative. Including main ideas, causality, and other inferential areas would have been better than the literal schema. Underachievers in reading can sometimes do a literal recall but still can not determine causality or do other higher order analyses about the story content.

Assessing students' intelligence scores with a Peabody Picture Vocabulary Test or similar test would have given an idea of the students' potential. One could have analyzed their unmediated and mediated potential score with the mediated and unmediated reading placement scores.

Any future research on this topic might include some of the above mentioned changes. Research should concentrate on types of mediation strategies and their effect on reading placements as well as techniques of teaching reading. This is especially crucial when considering the needs of the low SES, underachieving student. Research such as this is critical if a good reading program is to be developed to promote a maximum growth in these students.

APPENDIX A
READING MATERIALS

Informal Reading Inventory (1970)

<u>Level</u>	<u>Name</u>	<u># of Words</u>	<u>Readability</u>
P-Silent	Joe and the Wolf	95	1.50
P-Oral	My Dog	70	1.80
1-Silent	Present from Grandfather	114	1.70
1-Oral	Surprise at the Zoo	97	1.70
2-Silent	The New Boy	188	1.70
2-Oral	An Airplane Ride	147	2.80
3-Silent	A Worried Family	225	3.00
3-Oral	A Martian's View of Earth	181	2.70
4-Silent	Dick's Lucky Day	302	4.20
4-Oral	A Sudden Change	277	4.90
5-Silent	Ships of the Desert	310	4.90
5-Oral	April Fool	279	4.70
6-Silent	The Great Bank Robbery	300	4.89
6-Oral	Bottles in the Sea	276	5.50

Barefoot Island (1982)

11	1000 Pails of Water	706	4.30
11	Jim Bridger	665	4.60

APPENDIX B
 DIFFICULTY LEVEL OF MEDIATED WORDS
 FROM INFORMAL READING INVENTORY PASSAGES

<u>Silent Passages</u>		<u>Oral Passages</u>	
<u>2nd grade</u>	<u>Word Difficulty</u>	<u>3rd grade</u>	<u>Word Difficulty</u>
bounded	10th	peculiar	6th
dared	8th	creatures	6th
snatched	4th	spotted	6th
figured	5th	space	4th
<u>3rd grade</u>		<u>4th grade</u>	
worried	4th	straggled	8th
report	4th	stiff	12th
temporary	6th	drifted	4th
accident	4th	swarming	6th
disconnect	4th	mass	6th
<u>4th grade</u>		<u>5th grade</u>	
storage	5th	scribbled	6th
obtain	6th	dared	8th
moisture	4th	thrust	8th
degree	10th	predict	6th
caravan	6th	devise	8th

APPENDIX C
VERBAL INTERACTION BETWEEN STUDENTS AND TEACHER

- T - pronounced distinctly the key word: scribbled
- T - used the key word in a sentence: The boy scribbled on the paper so quickly that it was hard to read.
- T - asked the following questions:
What does the word scribbled mean in this sentence?
Sa - messy drawing
Sb - scribbled with his finger
- T - Have you ever scribbled?
Sa - yes
Sb - yes
- T - Do you ever scribble now?
Sa - yes
Sb - yes
- T - When you write fast, do you scribble?
Sa - no
Sb - yes
- T - If I write very neatly, do I scribble?
Sa - no
Sb - no
- T - asked for synonyms: Tell me some words that mean the same?

Sa - messy drawing

Sb - messy

T - asked the students to use the key word in a sentence.

Sa - I scribbled when I was a baby.

Sb - I scribbled all over the paper.

T - asked the students for definition: To you, the word scribbled means?

Sa - messy

Sb - messy

APPENDIX D
STUDY RESULTS

Table D-1

Level 3 Silent IRI Results

Observation	Group	Static # Recall Units	Percent Completed	Placement	Mediated # Recall Units	Percent Completed	Placement
1	E	1	5	F	5	25	F
2	E	0	0	F	2	10	F
3	E	0	0	F	1	5	F
4	E	3	15	F	7	35	F
5	E	13	65	IND	17	85	IND
6	E	11	55	INST	14	70	IND
7	E	12	60	IND	14	70	IND
8	E	4	20	F	10	50	INST
9	E	1	5	F	5	25	F
10	E	8	40	INST	14	70	IND
11	E	0	0	F	5	25	F
12	C	10	50	INST	10	50	INST
13	C	13	65	IND	8	40	INST
14	C	4	20	F	4	20	F
15	C	11	55	INST	11	55	INST
16	C	0	0	F	0	0	F
17	C	15	75	IND	17	85	IND
18	C	0	0	F	0	0	F
19	C	0	0	F	3	15	F
20	C	9	45	INST	11	55	INST
21	C	1	5	F	7	35	INST

Table D-2

Level 5 Listening IRI Results

Observation	Group	Static # Recall Units	Percent Completed	Placement	Mediated # Recall Units	Percent Completed	Placement
1	E	0	0	F	0	0	F
2	E	0	0	F	0	0	F
3	E	0	0	F	0	0	F
4	E	0	0	F	0	0	F
5	E	0	0	F	16	80	IND
6	E	0	0	F	13	65	IND
7	E	0	0	F	13	65	IND
8	E	0	0	F	8	40	INST
9	E	0	0	F	0	0	F
10	E	0	0	F	18	90	IND
11	E	13	65	IND	14	70	IND
12	C	0	0	F	0	0	F
13	C	14	70	IND	11	55	INST
14	C	0	0	F	0	0	F
15	C	0	0	F	0	0	F
16	C	16	80	IND	17	85	IND
17	C	0	0	F	15	75	INST
18	C	0	0	F	0	0	F
19	C	0	0	F	0	0	F
20	C	0	0	F	0	0	F
21	C	0	0	F	0	0	F

Table D-3

Level 4 Silent IRI Results

Observation	Group	Static # Recall Units	Percent Completed	Placement	Mediated # Recall Units	Percent Completed	Placement
1	E	0	0	F	0	0	F
2	E	0	0	F	0	0	F
3	E	0	0	F	0	0	F
4	E	0	0	F	0	0	F
5	E	9	45	INST	14	70	IND
6	E	12	60	IND	12	60	IND
7	E	10	50	INST	12	60	IND
8	E	0	0	F	10	50	INST
9	E	2	10	F	5	25	F
10	E	12	60	IND	17	80	IND
11	E	0	0	F	10	50	INST
12	C	0	0	F	9	45	F
13	C	14	70	INST	11	55	IND
14	C	0	0	F	0	0	INST
15	C	9	45	INST	9	45	INST
16	C	0	0	F	0	0	INST
17	C	14	70	IND	16	80	IND
18	C	0	0	F	0	0	F
19	C	0	0	F	0	0	F
20	C	0	0	F	13	65	IND
21	C	0	0	F	7	35	F

Table D-4

Level 4 Listening IRI Results

Observation	Group	Static # Recall Units	Percent Completed	Placement	Mediated # Recall Units	Percent Completed	Placement
1	E	5	20	F	8	40	INST
2	E	0	0	F	0	0	F
3	E	8	40	INST	10	50	INST
4	E	10	50	INST	10	50	INST
5	E	0	0	F	10	50	INST
6	E	10	50	INST	13	65	IND
7	E	11	55	INST	16	80	IND
8	E	0	0	F	12	60	IND
9	E	0	0	F	6	30	F
10	E	16	80	IND	12	60	INST
11	E	0	0	F	8	40	INST
12	C	9	45	INST	10	50	INST
13	C	13	65	INST	10	50	INST
14	C	6	30	F	4	20	F
15	C	10	50	INST	0	0	F
16	C	0	0	F	0	0	F
17	C	6	30	F	12	60	INST
18	C	0	0	F	11	55	INST
19	C	0	0	F	0	0	F
20	C	0	0	F	0	0	F
21	C	0	0	F	0	0	F

Table D-5

Level 4 Basal Story Results

Observation	Group	Number of Recall Units	Percent Completed	Placement
1	E	14	70	IND
2	E	13	65	IND
3	E	11	65	INST
4	E	9	45	INST
5	E	9	45	INST
6	E	9	45	INST
7	E	10	50	INST
8	E	12	60	IND
9	E	10	50	INST
10	E	3	15	F
11	E	4	20	F
12	C	10	50	INST
13	C	9	45	INST
14	C	7	35	F
15	C	5	25	F
16	C	4	20	F
17	C	4	20	F
18	C	2	10	F
19	C	2	10	F
20	C	3	15	F
21	C	5	25	F

APPENDIX E
PARENT/CHILD CONSENT FORMS

Dear Parents,

I'm a graduate student at the University of Florida. I'm interested in studying to see if students can effectively handle stories that are currently too difficult for them.

I will help students define important words before reading short paragraphs and stories. After reading, the students will recall these paragraphs to me. The study will take about a total of 1½ hours of your child's time. This time will be split among three different times over the next four weeks.

There will be no risk involved to your child. You have the right to withdraw your child from the project at any time without any prejudice. The information your child provides will be kept confidential unless disclosure is required under Florida law.

If you have any questions about the study, please call me at 378-2591 (work) or 373-6983 (home).

Thank you,

Sherry K. Newman

I have read and I understand the procedure described above. I agree for my child _____ to participate in the procedure and I have received a copy of this description.

My child has permission to be in the study on reading placement.

Parent's signature

2nd Parent/Witness

Relationship to child

Date

I am Mrs. Newman. I go to school at the University of Florida and teach third grade at J. J. Finley.

I need your help in finding out if you can read and understand stories that may be slightly hard for you. I will help you learn important words for some stories. Then you will read a story and tell it back to me. We will do this for a short and long story. I hope you will help me with this project. This will help me find out if boys' and girls' reading books are too easy for them.

You will be able to stop at any time and rest. Do you have any questions? I'll be glad to answer any of your questions.

Will you help me in my study on reading stories?

Answer yes _____ no _____

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BIOGRAPHICAL SKETCH

Sherry Kragler was born in Clinton, Illinois, on February 27, 1944. She attended public school in Mattoon, Illinois. She graduated from Mattoon High School in 1967.

Sherry attended Indiana University in Bloomington, Indiana. She received her B.S. in education in 1966, and her M.S. in special education in 1968.

After moving to Gainesville, Florida, she taught in Hampton and Gainesville as a primary classroom teacher. Once her two children were in school, Sherry resumed her schooling and received her Ed.S. in 1978, from the University of Florida. She then taught in Gainesville as a reading resource teacher.

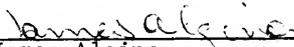
In 1982, Sherry began her doctoral program at the University of Florida. While finishing her coursework, Sherry served as a graduate assistant and graduate teaching assistant. While writing her dissertation, she worked as a Chapter I classroom teacher. She received her Ph.D. in instruction and curriculum in 1986.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



William Powell, Chairman
Professor of Instruction and
Curriculum

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



James Algina
Professor of Foundations of
Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



John Bengston
Associate Professor of
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Ruthellen Crews
Professor of Instruction and
Curriculum

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Linda Crocker
Linda Crocker
Professor of Foundations of
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This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

May, 1986

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