

***Case Study: The combined effects of the
Neurological Impress Method and the Educational Therapy Approach
upon an adult disabled reader***

Thesis

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Abstract

The adult remedial reader often exhibits diverse needs which are necessary to be taken into consideration amid remediation efforts. Low self-esteem, sense of failure, and dependency upon trusted teachers, family, and friends briefly describe the obstacles which the adult learner must contend with. This is a case study of a 38 year old woman attending Adult Basic Education classes in an urban community. Despite having progressed through the twelfth grade, her educational experiences were generally inconsistent and academically unsuccessful. The subject read at a second grade independent reading level and exhibited great need in phonological awareness at the initial stages of the study. Extreme hearing loss in her right ear further compounded her literacy difficulties. The Neurological Impress Method and the Educational Therapy Approach were methods of reading remediation which helped to reduce anxieties and enlisted the active participation of the subject. Instructional planning, interpretation of the problem, and assessment of efforts were co-determined by both tutor and subject. The results of this study indicate that the Neurological Impress Method showed the most positive effects upon the subject's silent reading grade level. Oral reading strategies were observed to be steadily improving, as was evident after a critical examination of Ekwall testing. The Educational Therapy Approach revealed important insights regarding the subject's past development along with current endeavors and difficulties. The sum of the study brought to light issues in education related to continuity and expectations.

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Chapter I

Statement of the Problem

Issues in Literacy

The ability for individuals with low literacy skills to gain meaningful employment is becoming increasingly difficult. Functionally illiterate is the term used to define this growing population. Many menial service occupations are now requiring an 8th grade reading level (Park, 1987, cited in Scully & Johnson, 1991). Furthermore, as literacy standards increase, economic, social, and personal ramifications are also on the rise (Scully & Johnson, 1991).

James Moffett (Lunsford, Moglen, & Slevin, 1990) has theorized that illiteracy is not the exclusive derivative of poor schooling, poverty, or government. Rather, suggests Moffett, it is "agnosis" or the fear of knowing which is the primary threat to full literacy acquisition; occurring amid the structures of families and institutions, but most damaging of all, *in our own minds*.

It is not wanting to know that sustains our sense of who we are by protecting us from the knowledge both of who we are not -- of who the other is -- and of what we may, with more courage, become (Lunsford, et al., 1990, p. 5).

Combating perceptions that literacy is *given*, is a series of *isolated skills*, and *exists outside of purposeful use*, is a necessary challenge for all concerned with understanding the functions of literacy in life and society (Fagan, 1988). Heath (cited in Lunsford et al., 1990) explains that literacy needs to be defined in terms of behavior rather than through unrelated literacy skills; moreover, literacy

behaviors are complex and resist simplifying, standardizing, and making predictable.

Jonathan Kozol (1985) explains that the functionally literate adult population often experiences feelings of shame and inadequacy. These individuals often find it necessary to develop strategies in order to cope with their low literacy abilities. Accomplishing daily tasks frequently demands reliance upon trusted family members, friends or teachers.

The functionally literate adult population exhibits diverse needs which ultimately must be taken into consideration within remedial reading programs. Diverse educational, psychological, social, cultural, cognitive, and physical factors of the reading disabled adult will ultimately affect methods of remediation.

In sum, a degree of compatibility should exist between what the remedial reader needs and wants, and what a program is designed to produce. A literacy student explains: "I want to read what others do -- what I see people reading in libraries, on the subway, and at home" (Bartholomae, cited in Lunsford, et al., 1990, p. 26). However, adult literacy programs often emphasize skills and structure over behavior and interests; reproducing the very problems the programs were originally designed to address. Bartholomae suggests that teachers,

... see the dominant programs of adult reading as problems of access...the dominant programs for adult readers (are) limiting access to books ... presenting reading as something to be done only through a program of assistance...We need to resist what seems to be an inevitable move -- to define the sensibilities of others in terms of their differences

from our own, to imagine that teaching inevitably involves giving others what we have and they lack -- our books, our habits, our version of critical consciousness (Bartholomae, cited in Lunsford, et al., 1990, p.26).

Purpose

The purpose of this study is to examine the effects of the Neurological Impress Method in an ABE tutorial situation which emphasizes an educational therapy approach.

Research Questions

In an Adult Basic Education tutorial situation,

- 1) will the practice of the Neurological Impress Method improve the oral reading fluency of a disabled reader?
- 2) will the Educational Therapy Approach to remediation improve the subject's independent reading behavior?
- 3) will the instructional practices developed during the educational therapy approach result in observable positive changes with regards to improved reading and writing skill?

Need for the Study

Students enrolled in Adult Basic Education classes exhibit extreme diversity in the areas of background, education, interest, and need. In order to better serve this heterogeneous population, the teacher must often create unique conditions to overcome barriers inhibiting future reading successes.

A traditional systematic approach is not likely to address repeated past failures and anxieties toward reading. Teachers of students with a history of unsuccessful literacy experiences need to address the latent fears and resist 'agnosis'. Finding out the intricacies of the learner's literacy development appears to be an initial and continuous concern.

Not one method, nor one answer will resolve all forces adversely affecting full literacy development. Investigating sensitive and non-threatening remediation strategies should warrant a closer look at the effects of both the educational therapy model and the neurological impress method upon a disabled adult reader.

Individualizing reading instruction validates case study research. The consolidation of data and anecdotal information collected from all sources may lead to improving repeated efforts and broadening our understanding of literacy in life and society.

Definition of Terms

Adult Basic Education (ABE): is an adult literacy program. ABE students generally read between the grade levels of 0 and 6.9.

Students are enrolled in ABE classes in order to learn and apply the basic skills of reading, writing, listening, speaking, and computation. These basic skills are stressed because they are tools for acquiring and transmitting information. The inability to obtain information results in a lack of resources to manage one's own life. Adults in ABE literacy programs often lack the information-gathering and problem-solving skills necessary to manage living in a complex society. ABE Literacy programs provide the opportunity for adults to learn the skills which enable them to become self-directed learners independently seeking information on health, finances, legal matters, and interpersonal relations (State Education Dept., 1983, p.31).

The Neurological Impress Method: is an individualized instructional method devised by H. G. Heckelman. It is a technique which may be used to help students improve decoding ability, reading rate, accuracy, phrasing, or expression. Student and teacher read passages simultaneously at the student's independent reading level. Reading periods of 5 to 10 minutes are recommended (Ekwall, 1993). See Appendix A for a detailed explanation of the neurological impress method used in this study.

The Educational Therapy Model: (Scully & Johnson, 1991) is a model that addresses the psychological and educational variables affecting an individual with learning problems. It is an approach to remediation through the

establishment of a personal relationship between teacher, tutor, or therapist, and the individual in need. The four stages are:

(1) *initial contact*, when the therapist comes to understand the nature of the individual's perception of his/her problem, learns about his/her interests, and develops a mutually agreed upon plan of action; (2) *integration of the treatment*, during which the therapist evaluates the accuracy of the individual's perception and develops strategies for integrating the remedial and therapeutic techniques to deal with the specific problems; (3) *focusing on the relationship* between the therapist and client, in which issues such as resistance to or avoidance of reading are discussed; and (4) *'termination'* in which the therapist and client deal with the issues of imminent separation (Scully & Johnson, 1991, p.127).

Limitations

The subject of this study suffers from extreme hearing loss in her right ear. The neurological impress method is generally performed with the teacher situated and reading on the right side of the student, stimulating the left hemisphere of the brain.

In this case, the teacher/student position was reversed in order to accommodate the disability. Progress may have been somewhat affected by this reversal in method.

This is a case study research project. And as such, caution should be taken regarding generalizations. What appeared to be effective or non-effective in the case of this ABE student/teacher relationship should not suggest that repeated efforts would demonstrate identical results.

Lacking from this study are statistical, hard data. However, since the researcher/tutor's objective did not include taking a formal cognitive approach (which might include interpreting the effects of the tutoring sessions in terms of an increase in standardized reading test scores) the results should be no less valued. The teaching and research methods used in this study were of an informal, affective nature. Methods of assessment, therefore, were similarly informal.

While the environment for the tutoring sessions was somewhat secluded from the classroom, conversations, general noise, and students passing in and out of the classroom were inhibiting and a source of continuous distraction. The

subject's performance during the Neurological Impress Method appeared to be somewhat adversely affected as a result.

Tutoring sessions were often sporadic. Hence, it was frequently difficult to maintain continuity through daily practice of the Neurological Impress Method. One week was entirely missed due to a scheduled school holiday.

Chapter II

Review of the Literature

Adult Basic Education

The 1920's and 30's saw a rise in interest in adult education, particularly among those wishing to improve the reading habits and interests of adults in the hopes of creating an "enlightened citizenry" (Rachal, Leonard, & Jackson, 1991). Not until the 1950's was there seen an increased interest in the *improvement* of reading skills among adults (Allen, Baker, & Carrillo, cited in Rachal et al., 1991). By the 1970's, ABE was becoming an established force in the raising of literacy levels among the low-literate adult population (Finely & Harrison, 1992).

Adult Basic Education students, however, " ...have goals of far greater import than learning to read, write, or compute" (State Dept. of Education, 1983, p. 35). The State Department of Education further asserts that while short-term objectives may include literacy, long-term goals are most likely to include better employment, improved standard of living, self-betterment, increased self-esteem, and assimilation into society.

Standing in the way of achieving these goals is a variety of barriers. Educational deficiencies are certainly among the barriers, but poor self-image, discouragement, sense of failure, unfamiliarity with 'the system', and inability to make decisions are greater barriers to realizing potential and meeting goals (State Department of Education, 1983, p. 35).

Students in ABE programs generally possess some degree of reading proficiency, but levels are often too low to meet the demands made upon them (Finely & Harrison, 1992). After interviewing 217 low-literate adult students

enrolled in ABE and High School Equivalency programs, Rachal, et al. (1991) concluded the population to be heterogeneous in interest and ability; while reading abilities and habits were lower than the general population's, more than half of the students questioned viewed themselves as 'good' or 'excellent' readers.

Instructional Practices

Despite the movement in education toward a holistic approach in literacy instruction, approaches to literacy for adult learners have traditionally emphasized the teaching of discrete skills and phonetics (Keefe & Meyer, 1991).

Keefe and Meyer (1980) found that when adults were taught in a holistic and meaning centered program the participants improved three grade levels after only three months of instruction. The conditions of holistic learning: immersion, demonstration, engagement, expectation, responsibility, approximation, employment, and response (Cambourne, 1988, cited in Keefe and Meyer, 1991), were easily modified for the adult learners and provided a curriculum that was most likely to be sensitive to the *functions* of literacy.

The reading material found in ABE classes is often in the form of passages intended to teach specific skills; furthermore, few books of good fiction are written for the mature low-level adult reader (Schierloh, 1992). Finding that abridged versions of classic novels to be "simplistic plot summaries", Schierloh (1992) and her colleagues successfully combined adapted versions with teacher-read excerpts from the original novels. In so doing, students were observed to maintain high levels of interest, read more frequently

and for enjoyment, participate in valuable discussions, and experience the satisfaction of reading a whole book from cover to cover. At the same time, the students were exposed to the rich language found in the more difficult novels, combined with modeled fluency, phrasing, and the expressiveness of a good reader. It was also noted that despite their limited literacy skills, the life experiences of the adult learners were "deep and sophisticated". The adult students were observed to possess the background knowledge necessary to "capture" and "relate to the universal experiences" generally found in classic literature.

Lessons from Adult Readers

Intake interviews can provide teachers of adults with valuable information which can be used in planning instruction. Establishing a rapport, disclosing interests and goals, exploring student's attitudes and knowledge of literacy behaviors should contribute to better serving the student's needs (Padak, Davidson, & Padak, 1990).

Exploring the early recollections of learning to read may be of extreme value to the remedial situation. Morawski (1990, cited in Morawski & Brunhuber, 1993) found that teachers' knowledge of student's early recollections of beginning to read often helped to explain students' "unresponsiveness to reading remediation".

In 1993, Morawski and Brunhuber compared early recollections of beginning to read between proficient and remedial adult readers. The

researchers found that remedial readers recalled learning to read to have occurred at school, guided by a teacher, and at the age of 7 to 10 years. The remedial readers perceived learning to read to be a negative experience, discouraging, and anxiety producing. Furthermore, they felt to have possessed little control over the entire process.

In contrast, the proficient readers of the study recalled learning to read between the ages of 3 to 6 years old, at home, and with parental guidance. These readers perceived reading as a positive experience, satisfying, and challenging. Also, this group experienced a sense of control over their early reading experiences.

The researchers concluded that teachers should provide a "replica of what happens... in the home environment which encourages reading acquisition" (p. 41), and resist prematurely assessing problem readers.

Fagan (1988) investigated the conceptions low-literate adults possess regarding reading and writing. The results of this study confirmed the belief that low-literate adults possess a restricted view of literacy. These deficit views emphasized skills, structured progress, and dependency upon teachers.

Looking at the reading habits of adult learners suggests that patterns in home literacy practice are likely unrelated to socioeconomic status or cultural/ethnic background. "There is as much variation in home literacy patterns within selected socioeconomic levels and/or cultural/ethnic groups as between them" (Hashway, Duke, & Farmer, 1993, p. 22). After examining the reading habits of young adults, Hashway et al. found that adult literacy behavior

was greatly influenced by an individual's goal orientation and willingness to persevere.

Educational Therapy

According to the New York State Department of Education, counseling for adult learners is considered to be a necessary and valuable component of adult education. It is highly recommended for promoting improved academic behavior, assisting adults in conquering barriers, and encouraging the attainment of individual goals. Furthermore, while effective counseling should enhance the academic program, it should also result in improved academic performance (State Dept. of Education, 1983).

Educational therapy is a counseling approach that has been shown effective with adults who are attempting to overcome feelings of failure, anxiety, and loss of self-esteem associated with low literacy achievement. Scully and Johnson (1991) found that when the educational model was in use, it helped to improve the student's self-confidence and motivation to learn in the tutorial situation.

This approach addresses the emotional needs of the learner prior to instruction. Not until these issues are discussed and considered is the individual free to concentrate on remediation. Educational therapy, explain the researchers, allows for a trusting relationship to develop between teacher and student which in turn helps to reduce resistance; ultimately replacing coping strategies with literacy behaviors. The educational therapy model is an approach

to remediation which emphasizes the student and tutor relationship. Educational therapy addresses in depth the psychological and educational variables affecting the individual in need (Scully and Johnson, 1991). Scully and Johnson (1991) identify four critical stages regarding the tutor (therapist) and student relationship:

- (1) initial contact, when the therapist comes to understand the nature of the individual's perception of his/her problem, learns about his/her interests, and develops a mutually agreed upon plan of action;
- (2) integration of the treatment, during which the therapist evaluates the accuracy of the individual's perception and develops strategies for integrating the remedial and therapeutic techniques to deal with the specific problems;
- (3) focusing on the relationship between the therapist and client, in which issues such as resistance to or avoidance of reading are discussed; and
- (4) "termination" in which the therapist and client deal with the issues of imminent separation (p. 127).

Speech/Hearing Impairment

Adult learners with disabilities present an additional factor to be considered. Inadequate reading ability for some adults may have its roots in the early childhood development years. Individuals with speech and hearing impairments, for instance, are at an increased risk for reading disabilities. Research with students possessing such language impairments indicate that semantic-syntactic language development, critical for reading comprehension, should be emphasized through experiences rich in oral and written language; complemented by activities which increase phonological awareness (Catts, 1993).

The effects of auditory perception upon phonological skill are not entirely clear. However, Watson and Miller (1993) found that there appears to exist, "...a strong relationship between speech perception and several of the phonological skills involved in reading including short- and long-term memory and phoneme segmentation" (p. 36).

The Neurological Impress Method

The neurological impress method is a method of remediation which addresses some to the oral language needs of a speech and language impaired student. Ekwall (1993) explains that the neurological impress method presents an oral reading model that assists students in identifying and correcting specific reading problems. Ekwall suggests that the success of the method to be primarily due to the student's repeated exposure to correct language forms over a relatively short period of time. A caution in using this method, however, is that too much time may be spent in reading material that is written at a low difficulty level; teachers often not expecting students to advance so quickly. (See appendix A for a detailed description of the neurological impress procedures)

The neurological impress method was devised by H. G. Heckelman. Heckelman's procedure dictates that the student and teacher read passages simultaneously at the student's independent reading level for periods of 5 to 10 minutes. The technique may be used in order to help students improve decoding ability, reading rate, accuracy, phrasing, or expression. Heckelman (1966, cited

in Ekwall, 1993) explains that students beginning at the first grade level may be reading at the third grade level after only two hours of training. After six hours of training, the students may have improved as much as the fifth or sixth grade reading level.

Research investigating the effects of the neurological impress method combined with a visual/tactile approach upon spelling and sight word remediation, found that students improved 2.6 years for spelling and 1.6 years for sight word accuracy after four months of practice (Traynelis-Yurek, 1988).

Strong and Traynelis-Yurek (1990) also found that the neurological impress method improved the self-confidence, comprehension, oral reading fluency, and attitude of remedial readers. "The subjects were reading more pages per session with increased fluency regardless of the source of their reading problem" (p. 30). The non-threatening learning situation has been observed to be a positive feature. Teachers have observed students' attitudes toward reading to improve drastically. Students have commented, "I read better...I read faster...I can answer questions better" when questioned after 4.5 hours of practice (Bedsworth, 1991, p. 565).

Summary of the Chapter

Students of adult basic education often represent extreme diversity in the areas of background, interest, need, and ability. Furthermore, ABE students frequently enter the instructional environment with goals far beyond mere literacy improvement. Hope for better employment, improved standard of

living, increased self-worth, and assimilation into society simplistically characterize this group's motivation to learn. Moreover, obstacles often exist which tend to adversely affect the ABE student's literacy progress. These difficulties oftentimes include poor self-image, discouragement, sense of failure, unfamiliarity with the system, and inability to make decisions.

ABE instructional practices have traditionally focused upon the learning of discrete skills and phonetics. Slowly, however, the holistic movement has entered the ABE realm. ABE teachers are adopting the literacy philosophy which emphasizes function over rigid instructional procedures. Adult students have responded positively to the change and have discovered enhanced relevancy and enjoyment amid the process.

Investigating the adult student's educational history, complimented by actively seeking insights pertaining to his or her early childhood development, has assisted teachers toward better serving the needs and interests of the adult learner. Intake interviews which address early recollections of beginning to read should provide valuable information which would assist in the design of an individualized instructional plan. Re-creating in the classroom a replica of valuable home literacy practices, while emphasizing a supportive and stress-free atmosphere, may be of particular importance. Adult students who possess severely restricted views regarding literacy acquisition may be greatly benefited should remediation efforts reflect the fore-stated principles.

Educational therapy has been a successful method of remediation which

has assisted in the creation of a supportive and trusting environment.

Throughout the educational therapy process, the emotional needs of the learner are addressed. Furthermore, the tutor and student share in determining a course of action as they engage in cooperative planning and the monitoring of progress.

Adult students who possess speech and hearing impairments present an additional challenge due to probable weaknesses in the areas of phonological skills. Instruction which emphasizes phonemic awareness and oral and written language experiences are recommended.

An oral reading technique which has been observed to positively affect self-confidence, comprehension, and fluency is the neurological impress method. Considered to be the primary benefit of this method is the student's repeated exposure to correct language forms, both oral and written, which provides strong justification for practice of this routine as part of remediation efforts.

Chapter III

Design of the Study

Hypotheses

1. The practice of the Neurological Impress Method will result in positive oral reading fluency gains for an ABE student.
2. The Educational Therapy Approach will improve the subject's independent reading behavior.
3. The instructional practices developed during the Educational Therapy Approach will result in improved reading and writing skill.

Methodology

SUBJECT: The subject of this study is a 38 year old African American / Native American woman. She is enrolled in an Adult Basic Education program in an urban community. The researcher will refer to the subject as Maria in an effort to protect her identity.

Maria had been attending the ABE class for approximately one month prior to participating in this study. Additionally, Maria had recently left her mother's home and was living independently for the first time. Re-entering the learning environment, and experiencing the pressures of responsibility and self-reliance, created a situation which was perceived by Maria to be highly motivational as well as extremely stressful.

Maria is well spoken and expresses her ideas with emotion and eloquence. Due to frequent mispronunciations occurring throughout Maria's speech, it was suspected by the researcher that she might possess a speech or hearing disorder. Subsequent conversations confirmed the suspicion.

At the time of our first meeting, Maria was working independently in class with a reading comprehension textbook and a spelling skills workbook.

When asked what her goals included, she revealed that she would eventually like to earn her GED diploma and further her education at the college level. She would ultimately like to speak out against injustice and help people, particularly women, who have experienced hardships and discouragement.

When asked about whether or not she read outside of the classroom, Maria responded that she generally did not. However, she did read the Bible and would like to improve her oral reading skills in order to be able to read aloud during Sunday Bible study classes. She expressed that she has always been too embarrassed to do so in the past. Spelling and math were also noted by Maria to be areas which she would like to improve.

The researcher reflected upon this initial conversation with Maria and concluded that perhaps the combined efforts of the neurological impress method and the educational therapy model might result in some positive changes for Maria over a relatively short period of time. The insights gained would be shared with her ABE instructor in hopes of better serving Maria's future instructional needs.

PROCEDURE:

This study covered a time period of 6 weeks, 20 sessions, and approximately 30 hours of tutoring time. A total of 3 hours was spent practicing the neurological impress method.

The data collected for this study included the following:

1. *Intake interview:* An intake interview was given during the second meeting. Questions and information focused upon the subject's education, health, family, self-image, ambitions and interests, and perceived strengths and weaknesses.

2. A *reading autobiography*, also completed during the second session, provided additional insights into the subject's reading and educational experiences. The researcher stated the following to the subject and recorded on paper her response.

"Try to recall your earliest reading experiences, what they were, and how you felt about them. Try to recall what books you liked when you were very small. Try to remember when you first started to read. Did these experiences occur at school or at home? And with whom? What do you think helped you the most in learning to read? What gave you the most trouble? What did you like or dislike the most and why?"

3. *The educational therapy model* was used by the researcher as a tool for structuring the tutorial sessions. The four stages of the model provided a framework for instructional decision making and sympathetic consideration of the subject's emotional needs. Both lesson planning and tutorial atmosphere attempted to reflect the principles of this model.

The *initial contact stage* was addressed by means of an intake interview and reading autobiography. Thus, an attempt was made to synthesize the researcher's analysis of the subject's instructional needs and the subject's notions concerning her strengths and weaknesses.

Consolidating these insights lead to the development of instructional strategies and goals which illustrates the *integration of treatment stage* of the educational therapy model.

The tutor/researcher and subject's *relationship* was dealt with through daily discussions pertaining to avoidance of reading and related reading inhibitions. Discussions centering around the subject's personal difficulties, which were perceived by her as distracting and adversely affecting her learning progress, were addressed at this time as well.

The *termination* stage of the tutorial situation had been discussed at the first meeting with the subject and repeatedly addressed throughout the sessions as needed.

4. The neurological impress method followed the prescribed procedure outlined in Appendix A. Tutorial sessions generally concluded with 15 minutes of practice. The text, They Led the Way: 14 American Women (Johnston, 1973) was read during these practice times. This book was chosen based upon the subject's interest in women's issues and reading ability. The number of reading trials using the neurological impress method and words per minute were recorded and graphed.

5. ***Precision Reading Record:*** The researcher kept track of the subject's precision reading progress by means of recording her oral reading accuracy rate on a weekly basis. The subject's reading text book was read aloud once a week, and comprehension questions were answered aloud immediately following each reading selection.

Six reading passages were completed after six weeks. Reading passages contained no more than 20 sentences and were followed by 9 reading comprehension questions.

Each sentence read by the subject was given either a plus score for correct readings, or a minus score for incorrect readings. The number correct divided by the total number of sentences, times 100 gave an efficiency rate. The percent of correctly answered comprehension questions was also recorded. Both reading accuracy and reading comprehension scores were graphed for each of the six weeks.

6. ***Additional data*** were obtained through daily observational notes and a researcher's journal. Reflections and observations were recorded at the conclusion of each tutorial session pertaining to the student's behavior and reading progress.

7. At the time of the third session, the subject was given ***Ekwall's Reading Inventory*** (Ekwall, 1986), providing the researcher/tutor with information pertinent to the student's reading accuracy, speed, and comprehension. Also, an initial grade level for reading was determined after an analysis of the test. The sum results of the inventory were compared to a second

administration which occurred during the last stage of the study. Forms A and B were used initially. Forms C and D were used during the final session. The researcher compared the results of the two informal reading inventories in order to determine evidence of reading progress before and after practice with the neurological impress method.

ANALYSIS:

Qualitative Research

As is true for all scientific research, research in reading entails careful observation, critical questioning, and the active search for answers. In so doing, hypotheses about students' reading behavior may be formulated which direct us toward a more accurate profile of the learning environment and the remedial reader. Thus, collecting and consolidating anecdotal information from a diversity of sources becomes a catalyst for more accurate evaluation, effective instruction, and a more thorough understanding of learning complexities.

The results gained from formal quantitative research furnish educators with valuable information. Formal testing provides evidence and critical data necessary for the advancement of knowledge. Qualitative research, on the other hand, is of equal importance in its sensitivity toward the intricacies of human nature.

This is a case study research project. Hence, entailing the collection of qualitative data and involving a comparison and careful analysis of data and data sources; a process sometimes referred to as "triangulation".

The question of objectivity, particularly in regards to humanistic research, is a valid concern; none the less, qualitative research is of scientific value in its distinctive search for answers and insights. And, while objectivity may be in its pure sense unattainable, it should none the less be valued and actively sought throughout all research endeavors.

Explains Stanovich (1993),
Although the social and moral motivation for attempting to view the world from inside another person's framework is to gain a more humanized understanding of another individual, the intellectual motivation must be that by doing so I may gain a betterview of the world (p. 289).

The research and analysis for this study have been performed valuing objectivity. A conscious effort has been made to organize and evaluate through systematic inquiry. The collected information was arranged for each of the seven data sources:

- 1) intake interview
- 2) reading autobiography
- 3) educational therapy
- 4) neurological impress method
- 5) precision reading record
- 6) observational notes and researcher's journal
- 7) Ekwall's reading inventory

An analysis of the previous seven categories was made in an effort to determine the effects of instruction which may or may not result in positive observable literacy gains in the remedial reading situation.

Chapter IV

Results of the Study

1. Intake Interview

Maria was 38 years old at the onset of this study. She had been independent from her mother and family for only three months prior to our first meeting. When asked to describe herself, Maria responded that she possessed "very low self-esteem" and a "poor self-image." She explained that she has spent all of her life in a position of dependency upon her family.

At the age of five, Maria developed severe ear infections which lead to complete hearing loss in her right ear. She felt that this disability led toward her family's response of "doing things for her". While she feels that she has always been physically and socially capable, family members possessed stronger personalities and more positive self-images which adversely affected Maria's self-confidence and motivation. As she viewed her family's "successes and accomplishments" she would often asked herself, "What's the matter with me?".

Maria's endeavors while living with her family have always been home oriented. In fact, family members often expressed to Maria their appreciation and praise of her domestic skill, but also neglected to include her in many of their social activities. Comparing herself to Cinderella, Maria explained, half-jokingly, that she was forever watching everyone else go to "the ball".

" I'm always afraid when things go right" because, she said, it is sure that "something will soon go wrong for me". Maria described herself as frequently confused and depressed, and has needed to seek psychiatric help over the years as a result.

Maria attended school in the district that she now lives. Although she progressed as far as the 12th grade, she never received her high school diploma. Except for the first couple of years of schooling, Maria had attended special education classes. She also received speech and hearing assistance. But, she has felt that these extra classes were too often inconsistent and did very little to help her succeed academically. In high school, classes for Maria were occupationally oriented.

When asked what she saw as positive in her life, Maria responded that she was proud of her heritage. Her mother is African-American and her father a Native-American. She has not seen her father for many years but would like to see him again in the future, with hopes of learning about his (and Maria's) extended family. She knows that he works for the railroad and lives in Pennsylvania. Maria's desire to meet her father again is very strong. She feels that she is very much like him physically and as well as in disposition: "slower, more thoughtful, and reserved", explained Maria.

Also, Maria is very proud of her mother, step-siblings, as well as other family members on her mother's side, all of whom have lead "exciting and successful lives". Furthermore, Maria has followed their accomplishments with interest.

Maria expressed that she would someday like to be a public speaker. She feels very strongly about social issues and enjoys sharing her ideas in speech. She cares deeply about others and would one day like to be able to write a book; perhaps an autobiography.

Reading, explained Maria, has always been a major obstacle. When asked if she liked to read, Maria responded that, "I don't read much". She has had little success with reading. However, she reads the Bible but "not much else" outside of school.

Maria has been depending upon the Department of Social Services (DSS) while attending adult education day classes. Additionally, she has held various jobs in the areas of food service and warehouse work.

Maria was concerned about her DSS benefits throughout the duration of this study. A reduction in her benefits, Maria explained, would affect her ability to continue attending day classes. "I want to improve, but it seems like they don't want you to succeed".

2. Reading Autobiography

Maria's earliest memories of beginning to read occurred in "kindergarten and first, mostly". She was moved up a grade during kindergarten because she was more physically mature than the other children. "They just threw me in. No warning.... We were given lots of worksheets. One after another. I got frustrated. I didn't know the directions." Also at this time in first grade, Maria

remembered, "...just sitting at the desk, like in sixth grade and (the teacher) kept giving work without explanation...I hated school."

Reading was an activity that "...was done mostly at school". Maria explained that it wasn't until she and her family moved during her first grade experience, and attended a different school, that she began to "catch on". In this new class she remembered that the teacher and students "did reading together", and engaged in activities with shared and choral reading. It was in second grade that Maria started to receive speech and hearing assistance. By the third and fourth grades "...everyone was doing it faster" than herself.

Maria's mother began to recognize that she was having problems with school, but didn't really know how to help. Maria described her mother as being over excited and angry. She would say to Maria, "Why can't you do this?" And, remembers Maria, she would get extra work, more work to do compared to the other kids, which she felt was like being punished. Maria rationalized that it was perhaps to help her to become more "disciplined". But, "I was given more, which made it harder". Her mother, who became anxious, would say to Maria, "I don't want you to be the dumbest in the class".

Maria recalled that she had a teacher in elementary school who would call the students to the blackboard. "The class would laugh....It was humiliating...But I had friends that would try to help me."

When asked what seemed to help her the most in learning to read, Maria responded "patience". Someone who made learning to read "exciting". "I learned the most, really, when I got out of high school." Maria remembered that

there was one special education teacher in ninth grade, however, who had helped her a great deal. This teacher worked with Maria on an individual basis and was "motivating" and "took extra time to explain things".

It wasn't until she started taking some adult education classes after high school that Maria felt she experienced the most success. "Because of lack of pressure and not always feeling behind everybody else".

3. Educational Therapy

a) Initial Contact Stage: (synthesizing researcher/tutor and subject's perception of remediation needs and remediation tactics)

It was believed by the researcher/tutor that Maria was most needy in two related areas: her reading confidence and reading enjoyment.

Maria's lack of confidence while reading seemed to result in nervous behaviors which ultimately affected her reading accuracy. The more she realized she was making mistakes, the more distracted she became which increased the number of errors that she made.

Secondly, even though Maria acknowledged that she should read more, reading was obviously an uncomfortable and dissatisfying activity; certainly (and understandably) not an endeavor she would choose to engage in for pleasure.

And finally, the phonetic weaknesses, possibly a result of her hearing disability, were addressed through direct instruction with common phonograms. Whether this weakness was hearing related or a result of nervousness, was not entirely clear to the researcher.

Maria shared her desire to "read faster and read better". Also, she expressed that she would like to be able to "spell better" and improve her writing skill. When asked if she could offer some ideas which might help her to improve in these area, Maria expressed uncertainty.

b) Integration of Treatment: Tutorial sessions were generally represented by the following format:

10 - 20 minutes of discussion

20 - 30 minutes of writing and spelling activities were emphasized through instruction in pronunciation, phonogram lists, and word families. Additional practice occurred through writing activities that were personally relevant (i.e. letters to DSS and Maria's case worker, and composing a resume for employment)

15 - 20 minutes engaged in reading using the neurological impress method

10 minutes with precision reading practice

10 minutes evaluating progress

c)Relationship: Factors affecting Maria's learning and reading progress were addressed during the first 10 -20 minutes of discussion time. Each session the researcher inquired whether Maria had spent time engaged in reading, outside of school. Five of the 20 sessions Maria responded that she had. Session #6, she said that she had tried to read a book given to her at church. She had read the Bible, sessions #12 and #13. She had re-read a chapter which was read during a tutoring session about Ernestine Rose, a woman from history

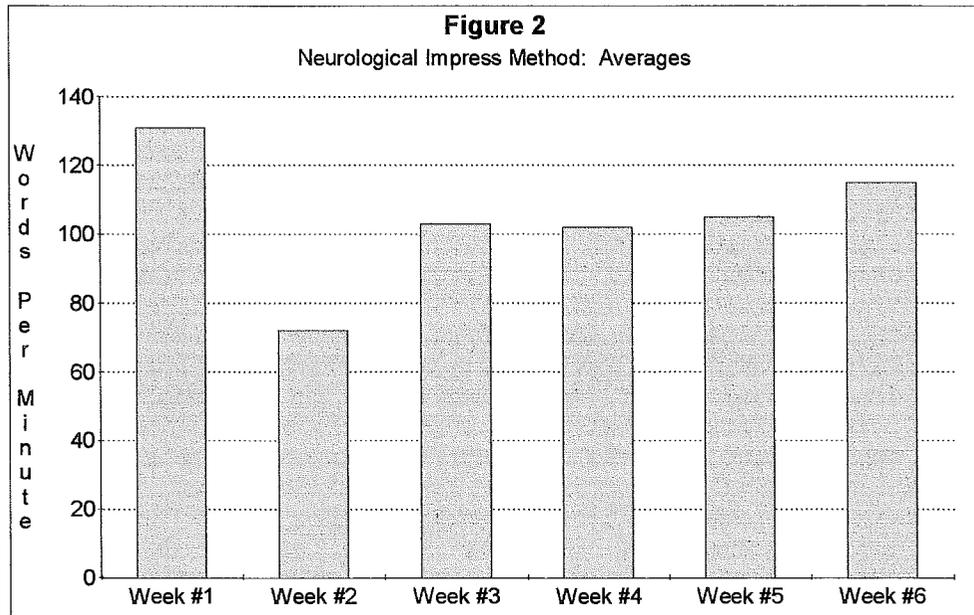
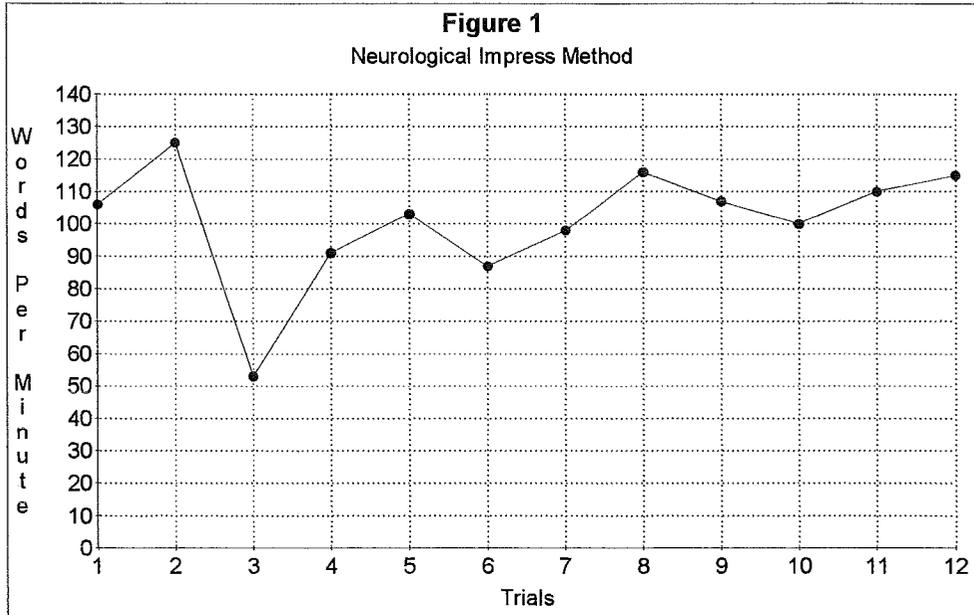
who publicly spoke out against injustice. And # 16, she had read some articles from magazines given to her. All other times, Maria responded that she was either "too busy" or "too tired and worried".

On the occasion of session #6, Maria brought in application forms for food stamps. She felt that she couldn't fill out the required information on her own. Assistance was provided by the tutor, although the questions and necessary information were quite simplistic. Upon completion, it was suggested by the tutor that perhaps she could have managed filling out the forms on her own. Maria responded that perhaps she could have, but "I've always had help, though...Even on trips and signing for a room....I've always had someone do it for me".

d) Termination: Maria was aware of the time limit of the relationship and rarely made any reference to the occasion when the sessions would end. She seemed happy with the arrangement, and repeatedly expressed her gratitude for the tutoring experience.

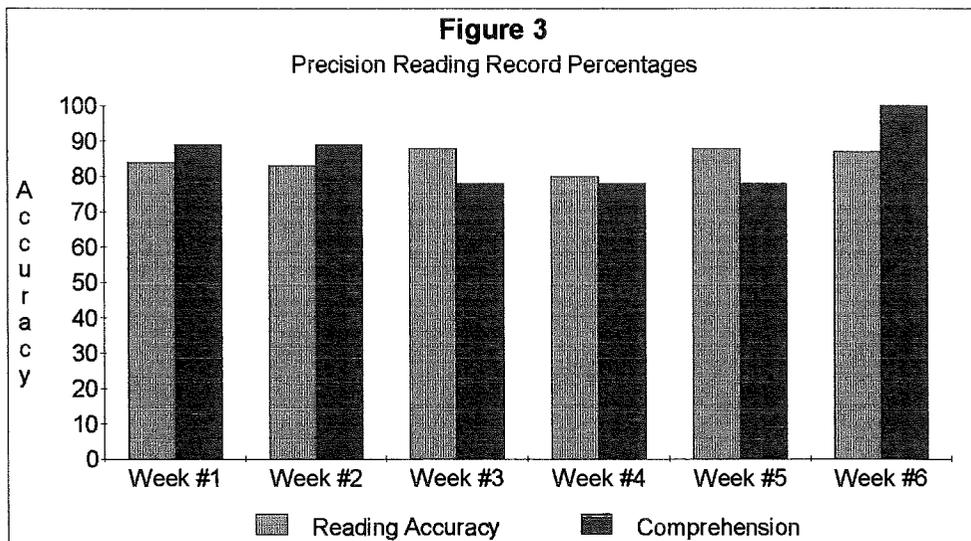
4. Neurological Impress Method

The results of the neurological impress method are presented in Figure 1. Trial practices are compared to the number of words read per minute. Figure 2 demonstrates progress as averaged for each of the six weeks.



5. *Precision Reading Record*

The results of the weekly precision reading record are presented in Figure 3. Maria's reading accuracy and reading comprehension progress are compared and represented by percentages. Appendices B, C, and D present examples of the scoring sheet used, and Maria's responses during the weekly reading accuracy and comprehension checks.



6. *Observational Notes and Researcher's Journal*

Maria responded well to instruction in structural analysis strategies and practice recognizing, with reasonable speed, a list of sight words and phrases.

An emphasis upon correct pronunciation was necessary as many consonant blends and vowel combinations were not easily, nor accurately identified by Maria. Beginning consonant blends, ending consonant blends, and

vowel phonemes were practiced daily. Initially, Maria expressed frustration at her inability to reproduce these sounds. By the end of the six weeks, however, she was able to accurately read the list with ease, with only one error. A strategy which Maria found helpful involved the close observation of mouth formation; as was repetitious practice.

Maria's desire to learn and attentiveness were noted to be frequently affected by students' conversations occurring in the next room, along with personal concerns and worries. Her distracted behavior often affected progress, which lead to additional errors in reading. If another student should enter the tutoring area, Maria would show reluctance to proceed with the activity.

Investing extra effort was sometimes not a desirable choice for Maria. While struggling to answer a comprehension question, the researcher suggested that perhaps she should re-read a portion of the text. Maria responded "no", that re-reading it would take too much time.

Maria's lack of confidence in her reading ability also adversely affected her concentration. Maria read the best, however, when the topic was of interest to her. She enjoyed reading together the book They Led the Way. But, although she was given the book to take home with her so that she could read it on her own, she only did so once.

A clothing room, in which donated clothes were kept, was located next to the classroom. Each Wednesday "the clothing room" was open to the adult students as well as the public. Clothes and other items were not purchased; rather, individuals made their choices to keep. Maria looked forward to

Wednesdays for this reason. The researcher and Maria decided that tutorial sessions would meet an hour later, allowing her two hours to browse in "the clothing room".

It was difficult for Maria to focus on her learning at the best of times; and Wednesdays were particularly troublesome. Searching for Maria in "the clothing room" and luring her away from its social and material attraction became the researcher's Wednesday morning challenging ritual.

7. Ekwall Reading Inventory

A summary of results for the initial Ekwall Reading Inventory are presented in Table 1. Independent, Instructional, and Frustration reading levels were determined; as were reading speed, word recognition errors, and errors with comprehension questioning. Table 2 presents the final Ekwall Reading Inventory, comparing the same categories.

Table 3 shows the word recognition errors and reading fluency which were demonstrated by Maria for the initial administration of the oral reading passages. Instructional and Frustration levels are presented, allowing for a comparison of word attack skill. Table 4 demonstrates Maria's final oral reading attempt.

Table 1
First Attempt - Ekwall Reading Inventory

Independent Level	<i>Oral Reading Grade Level</i> Word Recognition Errors	2 2	Questions missed	0
	<i>Silent Reading Grade Level</i>	2	Questions missed Speed	0 2 min.
Instructional Level	<i>Oral Reading Grade Level</i> Word Recognition Errors	3 13	Questions missed	0
	<i>Silent Reading Grade Level</i>	3	Questions missed Speed	0 4 min.
Frustration Level	<i>Oral Reading Grade Level</i> Word Recognition Errors	4 19	Questions missed	1
	<i>Silent Reading Grade Level</i>	4	Questions missed Speed	5 3 min.

Table 2
Second Attempt - Ekwall Summary

Independent Level	<i>Oral Reading Grade Level</i> Word Recognition Errors	2 2	Questions missed	0
	<i>Silent Reading Grade Level</i>	4	Questions missed Speed	1 2 min.
Instructional Level	<i>Oral Reading Grade Level</i> Word Recognition Errors	3 13	Questions missed	0
	<i>Silent Reading Grade Level</i>	NA	Questions missed Speed	NA NA
Frustration Level	<i>Oral Reading Grade Level</i> Word Recognition Errors	4 21	Questions missed	1
	<i>Silent Reading Grade Level</i>	5	Questions missed Speed	6 3 min.

Table 3
Ekwall Oral Reading Passages

Grade 3 - Instructional Level	Grade 4 - Frustration Level
<p>Katherine went ^{the} from on an airplane. [^] One day her father told her that she could ride on an airplane to visit her grandmother and grandfather. She was very <u>happy</u> and could hardly wait to get started.</p> <p>When the time came to go, her father went to the ticket counter and paid ^(o) for the airplane ticket. Her mother helped her get on the airplane. Then ^{the} a lady told her to buckle her seat belt and she even helped her with it.</p> <p>Soon the airplane was going very fast down the runway. ^{Katherine} Kathy was afraid at first but soon the airplane was in the air. ^{Katherine peeked} Kathy peered out of window at the ground below, ^{there was} where the houses and cars ^{looking} looked very small. The lady gave Kathy something to drink and a sandwich to eat.</p>	<p>(poor phrasing and stress)</p> <p>Some people enjoy ^(exploring) the ^{mini} many caves in this country. This can be a lot of fun but it can also be dangerous because you might get lost. Many people have been lost in caves because they did not know what to do to find their way out. (word by word)</p> <p>One thing that people ^{hope to} who explore caves ^(loses place) often take with them is a ball of string. The string serves an important ^(purpose) in keeping them from getting lost. They tie one end of the string to a stake ^{of} outside ^{roll} the cave and ^{unroll} the string as they walk ^{alone} along. This way, ^{then} when they ^{won't live in} want to leave the cave, all they have to do to find their way out is to follow the string.</p> <p>Some caves may appear small at the opening, but when you get inside ^{they} there may be ^{and caves} many giant rooms ^{of caverns} in them. One of the ^{"M"} largest known caves in the world is Mammoth Cave in Kentucky. It contains enormous ^{Caves} caverns and underground rivers, and ^{many} may take ⁷⁰ up as much space as 78 square miles.</p>
<p>repetition ~~~~~</p> <p>pause </p> <p>substitution —</p> <p>insert ^</p>	<p>mispronunciation "M"</p> <p>aid given ()</p> <p>self corrected ✓</p> <p>omission O</p>

Table 4
Ekwall Oral Reading Passages - Final Attempt

Grade 3 - Instructional Level	Grade 4 - Frustration Level
<p>Julie's school Judy's class was going on a trip to visit an airplane ✓ airport. Before they left they read some books about airplanes and airplane pilots. Everyone in <u>(the)</u> class was excited when it ^{was} came time to go.</p> <p>The class rode to the airport in ^{the} a big yellow bus. After the bus stopped, the first person to get off was ^{Julie's} Judy's teacher. She told the class that they must all ^{stand} stay together so that none of the students would get lost.</p> <p>First, they visited <u>(the)</u> the ticket counter and learned how ^{to} passengers buy their tickets. Then ^{the} a pilot came and told them he would take them on ^{the} a large airplane. After they were inside the airplane everyone was surprised because it was so large. When ^{Julie's} Judy's class got back to school they all said they ^{were} wanted to visit the airport again.</p>	<p>A desert is a place where the weather is dry and often hot. Some people think it is a place where ^{they} there is nothing ^{by} but sand. This is ^{It} truly ^{truly} true sometimes, but some deserts have many kinds of plants and animals ^{lives} living in them. The kinds of ^{place} plants and animals ^{that} live ^{live} there usually do not require much water. For example, some desert plants can store water in their leaves and ^a exist for long periods of time without rain.</p> <p>Some animals <u>(that)</u> live in the desert ^{gets} get all of the water they need by eating <u>(the)</u> leaves ^{from} of plants that have water in them. People who ^{live} live have been lost in the desert have died because they had no water to drink. Some of these people would not have died if they had known how to survive. People who know how to survive in ^{much} such ^{places} a dry place often ^{from} know how ^{"M"} to obtain water from cactus plants.</p> <p>^{Some people} A person may enjoy living in the desert because he thinks it is beautiful, but ^{other} another persons person may think the same place is not pretty at all.</p>
<p>repetition ~~~~~</p> <p>pause </p> <p>substitution —</p> <p>insert ^</p>	<p>mispronunciation "M"</p> <p>aid given ()</p> <p>self corrected ✓</p> <p>omission ○</p>

Data Analysis

Interpretation of the Hypotheses

1. The practice of the neurological impress method will result in positive oral reading fluency gains.

The first two trial scores of the Neurological Impress Method (Figure 1), and Week # 1 (Figure 2) of the Weekly Averages were not included as part of the data analysis due to unfamiliarity with the technique, the tutor's greater degree of guidance, and the need for a pattern of reading normalcy to develop. Therefore, an analysis of Figures 1 and 2 focused upon Maria's reading rate in terms of words per minute from Trial 3 to Trial 12, and Weeks 2 through 6. The lowest score occurring at Trial 3, whereby Maria first attempts to set the pace of the practice. And the highest score, Trial 8, whereby Maria shows great interest in the story about Ernestine Rose which was taken home and re-read by Maria independently. The second lowest score occurred at Trial 6, the first day of practice after a week's vacation. The vacation week occurred between Weeks 3 and 4, resulting in a slightly less average for Week 4. Despite the setback, Maria had almost doubled her initial reading speed by the final practice session, Week 6, as compared to Trial 3, Week 2.

Maria's precision reading progress, Figure 3, demonstrates what appears to be a highly erratic group of scores. Initially, reading accuracy and comprehension scores remained quite consistent throughout Weeks 1 and 2. However, as Maria struggled to improve her reading accuracy, and was developing better decoding efficiency, comprehension appeared to be negatively

affected. It is not until the final meeting that Maria is able to attain a 100% comprehension with only a slight decrease in her reading accuracy rate.

Taking into account the extenuating circumstances of time away from practice and interest in reading material, the general pattern of progress with the neurological impress method suggests that Maria's reading speed and fluency show a definite improvement and indicates that the practice of the neurological impress method was beneficial for developing these skills.

2. The Educational Therapy Approach will improve the subject's independent reading behavior.

The Educational Therapy Approach and the data collected from the intake interview, reading autobiography, and researcher's notes, are less forthright, but rather elude to some positive changes regarding the subject's independent reading behavior.

Maria's independent reading behavior at the beginning of this study was quite low and generally confined to solely reading the Bible. However, Maria demonstrated some positive changes as she engaged in re-reading selections from the text They Led the Way, read and discussed several magazine articles given to her, and read parts of a book given to her by a friend. Albeit few instances, she shows in her attempts that her independent reading behaviors were slowly improving.

The researcher daily inquired as to whether or not Maria had read outside of school. Maria would frequently express factors in her life interfering with her desire and/or ability to read outside of the classroom. The occasions in

which she did engage in pleasure reading, she excitedly and with great pride shared the information prior to being asked.

It would appear that the encouragement and persistent questioning regarding the subject's independent reading behavior, coupled with discussions on the importance of reading for reading improvement, and enthusiastic interest in generally reading for pleasure, made a positive impression upon Maria. The Educational Therapy Approach seemingly contributed to the positive changes toward improving Maria's independent reading behaviors.

3. The instructional practices developed during the Educational Therapy Approach will result in improved reading and writing skill.

The Ekwall testing from First Attempt, Table 1, and Final Attempt, Table 2, show very little reading improvement as far as advancement in reading grade level. It is not until a comparison is made of Tables 3 and 4, regarding Maria's reading errors, does a positive change in Maria's reading strategies begin to show itself.

An examination of the first Ekwall test demonstrates Maria's initial tendency to place an over reliance upon initial consonant clues and a general strategy of word-guessing. We also see a lack of self-corrections, and aid given by the tutor with the decoding of several words.

In contrast, the second attempt shows repetitious efforts to practice correct word identification, which coincided with numerous repetitions and self-corrections. Furthermore, the tutor did not have to provide word identification assistance during the second testing situation. Maria utilized contextual clues

along with her developing phonetic knowledge; at the same time she attended to overall meaning, as opposed to word by word reading. She maintained a reasonably continuous speed, without undue pausing, and words that Maria inserted into the text made sense and didn't take away from its general meaning.

An examination of the Grade 3 Passage at the instructional level, Table 3, shows Maria reading Katherine throughout the text until the last sentence whereby she reads Kathy correctly. Throughout the Grade 3 Passage, Table 4, Maria seems to be repeating a similar lack of attention to the character's name, but, unlike the first occasion, she never catches her mistake. Also noteworthy, are the increased omissions during the final testing session as opposed to the first. Nonetheless, the text maintained meaning despite the number of omissions.

The Ekwall silent reading scores demonstrate a definite improvement: from grade 2, independent level, to grade 4. Oral reading scores remained the same for both testing situations, but silent reading scores increased two grade levels.

The two Ekwall testing situations suggest that Maria was developing a greater repertoire of reading strategies, demonstrating some noteworthy improvement in regards to reading skill and strategy.

Initial discussions revealed that Maria would someday like to write a book, perhaps an autobiography. However, Maria also admitted the need for improved spelling ability. Maria's lack of phonological awareness was evident in both her reading and writing demonstrations. Maria's appreciation for writing was high even at the beginning stages of the study. Her ability to rely upon

phonetic spellings was extremely low, however, and evident in the researchers inability to accurately read what Maria wrote during the initial stages of the study.

Maria stated that she often would write at night-time when she had difficulty sleeping, expressing her thoughts and concerns in a journal format. She held no qualms toward the sharing of her writings with the researcher, often with the primary intent of seeking spelling assistance and inquiry as to whether or not she was "making sense". The direct instruction in phonograms, blends, and word lists appeared to be helpful to Maria and was often noted to carry over from tutoring lessons to journal writings at home. Still, formal writing, as in filling out forms or writing letters continued to intimidate her, as she demonstrated a reluctance to rely upon her improved ability to spell words correctly should the need arise.

Summary

The practice of the Neurological Impress Method resulted in oral reading fluency gains which were evident throughout the progression of scores excluding those for Trials 1 and 2, and Week #1 of Figures 1 and 2. The highest score reflecting the subject's particular interest in the story about Ernestine Rose, and lowest score occurring after a week's absence from the tutoring sessions.

Reading accuracy and reading comprehension scores fluctuated greatly, with comprehension showing the least improvement midway, reflecting the subject's struggle with her reading fluency and accuracy. The final precision

reading record, however, demonstrates an increased comprehension score with a high accuracy score which was consistent with the prior week's accuracy score.

The subject's independent reading behavior was slow to change, but evidence of positive change was demonstrated on several occasions as the subject engaged in reading magazine articles, re-read a chapter from a tutoring session, and read selections from a borrowed book.

The instructional practices developed during the Educational Therapy Approach resulted in some observable positive changes related to reading and writing skill.

A comparison of reading errors and behaviors from Ekwall tests A and B to the final test C and D, shows a positive shift in the subject's use of reading strategies. While oral reading grade level remained constant, silent reading improved two grade levels. Random word-guessing and seeking decoding assistance are noticeably absent from the final test passages. Rather, self-corrections, repetitions, omissions, use of contextual clues, and an increased reliance upon phonetic knowledge were noted to be beneficial to the subject's improved reading fluency.

The subject's writing skill showed observable improvement with regards to her personal journal writings. Phonetic instruction was noted to carry over from tutoring sessions, affecting her independent journal writings with more accurate spellings. A general reluctance to complete formal writing tasks remained an inhibiting exercise for the subject, however.

Chapter V

Conclusions and Implications

Conclusions

The Neurological Impress Method may not have been profoundly effective; it was, however, a method of remediation which Maria easily responded to. While measurements of success, as with Ekwall and the precision reading record, were somewhat vague, the patterns of change presented themselves once the complete picture of Maria's literacy growth was examined.

Alone, Ekwall scores and precision reading scores presented a somewhat dismal representation: oral reading grade levels remained the same, and comprehension dropped from an 89% during the first two weeks to a 77% in all weeks thereafter. It was not until the final week that Maria was able to achieve a comprehension score of 100%. These discrepancies, however, may well have been simply due to Maria's struggle to practice new and more efficient reading behaviors and strategies; all of which could have naturally affected her comprehension, speed, and accuracy amid the effort.

Nor is it surprising, furthermore, that Maria should have progressed two grade levels for silent reading. Silent reading is in itself a less threatening activity than oral reading. The reader is less likely to be self-judgmental, nor suffer the stress of possible embarrassment. Minus an audience, Maria was able to demonstrate improved speed while maintaining reasonable comprehension.

Oral reading, unless performed simultaneously during the Neurological Impress Method, was very difficult for Maria. Her discomfort was evident to the both of us, and for this reason, purposely avoided. The Neurological Impress Method, hence, provided an ideal situation to practice oral reading without the burdening stress of reading aloud, and alone. Further praise for this method includes its capacity to assist remedial readers with fluent reading experiences which do not sound immature. Maria was able to hear herself read with expression, phrasing, and fluency, as opposed to the laborious reading of a remedial reader. She was challenged to maintain a pace which in turn helped to sustain her interest. Maria was the most focused and demonstrated the greatest amount of effort during these practice times, unlike any other tasks she performed throughout the tutoring sessions.

Perhaps the most significant evidence of reading progress occurred after our meetings terminated. As a gift, I had given Maria three women's biographies, written at about the forth grade reading level, and a writing journal. A month or so later I met her ABE instructor who proudly informed me that Maria had read all of the books that I had given her. She further informed me, though, that Maria continued to struggle with the phonetic spelling of words, sharing with me Maria's recent difficulty spelling the word *energy*, unable to distinguish the initial blend, *en-*.

The remarkable value of the Educational Therapy model is in its deliberate approach toward understanding the individual: their reading strengths and weaknesses and perceived history of the problem; ultimately an empathetic

approach to remediation. Jointly, weaknesses were determined; cooperatively, a plan of action was established. In so doing, the debilitating pattern of dependency is somewhat thwarted.

As a result of the Educational Therapy Model, Maria became more than a remedial reader, mere subject of a case-study. Maria ultimately represented an adult population more accustomed to defeat than success, daily encountering obstacles of troubling and overwhelming proportions. The New York State Department of Education, as previously stated, describes ABE students as possessing educational deficiencies, poor self-images, discouragement, sense of failure, inability to make decisions. Each description is an accurate portrayal of Maria's situation.

Maria reveals a personal history wrought with critical issues which should be of importance to both parents and educators. Maria's educational experiences and insights ought to provoke grave concern. In kindergarten, a time when children possess a natural curiosity and excitement toward learning, Maria was pushed ahead a grade due to her physical maturity. She tells of a teacher who assigned worksheet on top of worksheet, apparently uncaring that at least one student was steadily falling further behind. A hearing impairment developed for Maria which compounded her already precarious school beginnings. She was embarrassed by insensitive teaching methods, and evidently evoked feelings of shame and frustration at home. Not so surprising, then, that every school year saw Maria fall steadily behind her classmates and that "everyone was doing it faster" than she. Maria eventually received some

assistance in speech and hearing, and special education, but not enough to stop the pattern of failure which had begun so much earlier. The help was just "too inconsistent", explained Maria.

At 38, Maria is a passionate and intelligent speaker. She cares deeply about people, and possesses admirable goals and ambitions. But, the heartbreaking fact remains: At 38, Maria reads far below what is considered necessary to take the GED exam. Her writing is mechanically poor, and her math skills are no more advanced than simple addition and subtraction. It shouldn't be too surprising, considering Maria's candid description of her childhood experiences coupled with her current challenges, that she has had to combat severe depression from time to time

The ABE classroom that Maria attends is a trusted and supportive community. The adult students were keenly aware of each other's hardships. Personal problems were openly discussed; assistance, encouragement and advice sought and received. Fundamentally, the atmosphere was as much therapeutic as it was supportive. Maria was fully absorbed by this social spirit. Shared struggles bound the classmates in a most powerful manner. During tutoring sessions, however, I felt the frustration of keeping Maria's attention from drifting toward heated conversations occurring in the next room. The force of the group's presence was illustrated as Maria appeared to have unconsciously substituted the names of fellow classmates, Katherine and Julie, within the Ekwall reading tests.

This cooperative and caring spirit was further demonstrated shortly before our last week together. A new student had joined the ABE class who was on parole, couldn't read nor write his own name, but possessed great determination to learn. Maria emphatically requested that I tutor him, explaining that he was "worse off" than she, even at the expense of her own tutoring time. I consented, but chose, rather, to tutor him on separate occasions. Maria's behavior and concern, I felt, were genuinely unselfish and revealed a shared understanding of this new student's predicament; an intuitive recognition of the urgency of addressing his instructional needs.

Coping with the challenges of life's transient nature is a natural human experience. For some, however, the ordeal is constantly an issue, a continuous source of anxiety. Dealing with the unpredictable is most severe for individuals who possess educational deficiencies. The illiterate, or functionally illiterate exemplify this dilemma. Substance abuse, poverty, emotional disorders, and police records often accompany, as well as intensify, these challenges, making matters more difficult to contend with.

James Moffett, as stated earlier, has theorized that the greatest threat to full literacy development is *fear*. Furthermore, explains Moffett, it is the fear which exists within one's own mind that is "the most damaging of all". Without a doubt, Maria's life was riddled with insecurities. While she never stated so verbally, the feeling that she might not be able to attain her educational and employment goals were a constant source of fear, and a nagging reality. Outside obstacles, such as the ability to continue receiving DSS benefits while attending

day classes, understandably appeared to Maria as if "they don't want you to succeed". Through writing, Maria discovered a healthy outlet in dealing with these problems and worries. On her own, Maria utilized the emotional release of writing in her journal as a form of catharsis. Just the same, the realities of her situation were no less intimidating.

Moffett's "agnosis", or the fear of knowing, might well apply to the behaviors and attitudes present among the adults responsible for Maria's emotional and educational growth. The "what ifs" are endless in retrospect. A more positive evaluation, however, resists "agnosis", and enlightens educators toward better serving a student population that tends to exist at the periphery of our educational system, often ill-equipped with the basic tools necessary to lead productive and independent lives.

Implications for Research

The Neurological Impress Method appears to have been an effective, non-threatening means of reading remediation. Further research might include a more lengthy study identifying the prolonged effects of the method upon disabled readers. Furthermore, examining the benefits of using this method several times amid the school day, as opposed to one ten or fifteen minute session, might provide additional results of interest.

The strength of the Neurological Impress Method appeared to have been in its ability to reduce anxiety while increasing self-confidence. Future research

investigating the benefits of similar non-threatening approaches should be of equal value.

The Educational Therapy Method might be repeated among the younger population, and the resulting information sensitively taken into consideration among educators as the child progresses from year to year. Identifying its value in helping to provide structure and continuity should be a legitimate rationale for future consideration.

Implications for Instructional Practices

Maria's case study assists in justifying early literacy programs and early identification of special needs children. Collaborating home and school efforts in conjunction with effective communication, are certainly necessary elements affecting future successes.

Maria provides educators with an important observation regarding the negative results of experiencing repeated failure. She "learned the most" in adult education, not because of outstanding nor innovative approaches to teaching, due, rather, to the absence of feeling "behind everybody else".

The results of this study implore an honest examination of student, teacher, and parent expectations. Ultimately, Maria's story is a lesson in prevention. Her experiences, behaviors, and explanations support approaches to teaching and learning which emphasize perceptive intervention methods. Embracing and empowering the unconventional student, as opposed to blind tactics of exclusion and dependency, is Maria's fundamental message.

References

- Bedsworth, B. (1991). The neurological impress method with middle school poor readers. Journal of Reading, *34* (7), 564-565.
- Catts, H. W. (1993). The relationship between speech-language impairments and reading disabilities. Journal of Speech and Hearing Research, *36*, 948-958.
- Ekwall, E. E. (1986). Ekwall reading inventory. Newton, MA.: Allyn & Bacon.
- Ekwall, E. E., & Shanker, J. L. (1993). Locating and correcting reading difficulties. New York: Macmillan.
- Fagan, W. T. (1988). Concepts of reading and writing among low-literate adults. Reading Research and Instruction, *27* (4), 47-60.
- Finlay, A., & Harrison, C. (1992). Measuring "success" in reading in adult basic education: A United Kingdom perspective. Journal of Reading, *36*, 164-172.
- Hashway, R. M., Duke, L. I., & Farmer, V. F. (1993). The reading habits of adult learners. Reading Improvement, *30*, 21-25.
- Johnson, J. (1973). They led the way: 14 american women. New York: Scholastic.
- Keefe, D., & Meyer, V. (1980). Adult disabled readers: Their perceived models of the reading process. Adult Literacy and Basic Education, *4*(2), 120-124.

- Keefe, D., & Meyer, V. (1991). Teaching adult new readers the whole language way. Journal of Reading, 35, 180-183.
- Kozol, J. (1985). Illiterate america. Garden City, NY: Anchor.
- Lunsford, A. A., Moglen, H., & Slevin J. (1990). The right to literacy. New York: The Modern Language Association of America.
- Morawski, C.M. & Brunhuber, B.S. (1993). Early recollections of learning to read: Implications for prevention and intervention of learning difficulties. Reading Research and Instruction, 32 (3), 35-48.
- Padak, N.D., Davidson, J. L., & Padak, G. M. (1990). Exploring reading with adult beginning readers. Journal of Reading, 34, 26-29.
- Rachal, J. R. , Leonard, R. , & Jackson, L. S. (1991). Reading habits of students in adult basic education and high school equivalency programs. Reading Research and Instruction, 30 (3), 76-88.
- Schierloh, M. M. (1992). Using classic novels with adult new readers. Journal of Reading, 35, 618-622.
- Scully, M.J. & Johnston, C.L. (1991). The use of an educational therapy model with an illiterate adult. Journal of Reading, 35, 126-131.
- Stanovich, K. E. (1993). Romance and reality. The Reading Teacher, 47(4), 280-291.
- State Education Department. (1983). Managing programs for adults. Albany, New York: Bureau of Curriculum Development and Division of Continuing Education.

- Strong, M. W., & Traynelis-Yured, E. (1990). An individualized remedial reading program using neurological impress. Reading Improvement, 27, 58-63.
- Traynelis-Yurek, E. (1988). Providing an oral fluent model for spelling and reading success. Reading Improvement, 25, 105-109.
- Watson, B. U. & Miller, T. K. (1993). Auditory perception, phonological processing, and reading ability/disability. Journal of Speech and Hearing Research, 36, 850-863.

APPENDIX A

The Neurological Impress Method Guidelines

(Strong & Traynelis-Yurek, 1990, p.28)

- A. The student reads in unison with the tutor.
- B. Initially, sentences and paragraphs are read in unison with the tutor several times to establish a fluent normal reading pattern. The reader reads with normal phrasing.
- C. No attention is given to the material.
- D. The main objective is to cover as many pages of material without long pauses as the student can read without becoming tired.
- E. At times, the tutor's voice is louder and slightly faster than the student's voice.
- F. As the student becomes more capable of taking a leadership role in the oral reading, the tutor lowers his or her voice and lags slightly behind the student's reading.
- G. If the student falters, the tutor increases the volume and speed of his or her reading.
- H. The tutor sits slightly to the back and side of the pupil.
- I. At first, the tutor accompanies the reading with a smooth continuous motion of his or her index finger under the words being read.
- J. Later, the student uses his or her finger to accompany the reading.
- K. Students are told not to concentrate on individual words.
- L. Students are to say the words as best they can without even thinking that they are reading.
- M. No concern is given to comprehension, only to the flow of the reading being done.
- N. Instruction is begun at the independent reading level with easy-to-read materials to gain confidence and to learn the procedure.
- O. If the student experiences a great deal of difficulty on a sentence and makes errors, the sentence or phrase is reread until the student is reading without errors. Then the student reads it alone.

APPENDIX B

PRECISION READING

Week #1

Comprehension Score: 89%

Efficiency Rate: (number correct, divided by total number of sentences, times 100)

83%

Selection Title: "Two Ways of Doing Business"

1. -	11. +	<p><u>NOTES:</u> Says "valley" for village, "freedom" for free, skips plural "s" says "did not" for didn't, often skips: that, this, and the. Says "foods" for goods, and "easier" for easy.</p> <p><u>Reading Comprehension:</u> 8 out of 9 questions correct Used good logic</p>
2. -	12. -	
3. -	13. +	
4. +	14. +	
5. +	15. +	
6. +	16. +	
7. +	17. +	
8. +	18. +	
9. +	19. +	
10. +		

Week #2

Comprehension Score: 89%

Efficiency Rate: (number correct, divided by total number of sentences, times 100)

83%

Selection Title: "Business Between Countries"

1. -	11. +	<p><u>NOTES:</u> Reads "other" for another, "have" for has, "lowest" for low, "country" countries, "seal" for sell(repeatedly), "they" for there, and "industrial" for industry.</p> <p><u>Reading Comprehension:</u> 8 out of 9 questions correct Distracted, listening to discussion in other room</p>
2. -	12. +	
3. -	13. +	
4. +	14. +	
5. -	15. +	
6. +	16. +	
7. +	17. +	
8. +	18. +	
9. +		
10. +		

APPENDIX C

PRECISION READING**Week #3**Comprehension Score: 77%

Efficiency Rate: (number correct, divided by total number of sentences, times 100)

88%

Selection Title: "Animals Mean Wealth"

1. +	11. +	<u>NOTES:</u> Adds "the, skips "the", adds plural "s", reads "any" for enough, "were" for was, skips some punctuation, "does" for "did"
2. -	12. +	
3. +	13. +	
4. -	14. +	
5. +	15. +	<u>Reading Comprehension:</u> 7 out of 9 questions correct
6. +	16. +	
7. +	17. +	
8. +	18. +	
9. +		
10. +		

Week #4Comprehension Score: 77%

Efficiency Rate: (number correct, divided by total number of sentences, times 100)

80%

Selection Title: "A Changing Language"

1. -	11. +	<u>NOTES:</u> skips ending -er, reads "away" for always, "from" for (for), "come" for came,
2. -	12. +	
3. -	13. +	
4. -	14. +	
5. +	15. +	<u>Reading Comprehension:</u> 7 out of 9 correct
6. +	16. +	
7. +	17. +	
8. +	18. +	
9. +	19. +	
10. +	20. +	

APPENDIX D

PRECISION READING

Week #5

Comprehension Score: 77%

Efficiency Rate: (number correct, divided by total number of sentences, times 100)

88%

Selection Title: "Thousands of Sounds"

1. +	11. +	<u>NOTES:</u> Reads "your" for you, "spoken" for speak, and "only" for or. Slow rate of speed
2. +	12. -	
3. +	13. +	
4. -		
5. +		
6. +		
7. +		<u>Reading Comprehension:</u>
8. +		7 out of 9 correct
9. +		
10. +		

Week #6

Comprehension Score: 100%

Efficiency Rate: (number correct, divided by total number of sentences, times 100)

84%

Selection Title: "English can be Strange"

1. +	11. +	<u>NOTES:</u> Has trouble with the title, re-reads several time. Pointing. Slow speed. Says " want" for went. "they" for there, "truck" for trunk, "difficult" for different.
2. +	12. +	
3. +	13. +	
4. -	14. +	
5. +	15. +	
6. -	16. +	
7. +	17. +	<u>Reading Comprehension:</u>
8. +	18. +	9 out of 9 correct
9. +	19. +	
10. +	20. +	
	21. +	
	22. -	
	23. +	
	24. -	