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Dyslexic College Students: Quest for Literacy.

Frances Grace Crochet

Louisiana State University and Agricultural & Mechanical College

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UMI
DYSLEXIC COLLEGE STUDENTS: QUEST FOR LITERACY

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy

in

The Department of Curriculum and Instruction

by

Frances Grace Crochet
A.S., Nicholls State University, 1981
B.S., Nicholls State University, 1983
M.Ed., Nicholls State University, 1989
August 1998
DEDICATION

I dedicate this dissertation to my family,

my husband Keith

for his continuous support, encouragement, and patience;

to my children

Alyce, Allen Michael, and Beau

for their understanding and cooperation;

my parents and Mary

who always supported and believed in me;

my sister, friend, and soul mate

for all the things I can not even begin to list.
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To all of my family, friends, and colleagues who have contributed to making this dissertation a reality.

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# TABLE OF CONTENTS

DEDICATION ........................................... ii

ACKNOWLEDGMENTS ................................... iii

ABSTRACT ............................................ vii

CHAPTER 1: INTRODUCTION .......................... 1
  Statement of the Problem ...................... 1
  Phonological Processing Defined ............ 2
  The Purpose of the Study ...................... 3
  The Setting ..................................... 6
  Study .......................................... 6
  Significance of the Study .................... 8
  Research Questions ............................ 10
  New Research Questions ....................... 11

CHAPTER 2: REVIEW OF THE LITERATURE .......... 12
  Focus ........................................... 12
  Debate .......................................... 13
  Remediation Programs ......................... 20
  Comparing Dyslexic Adults .................... 26
  Learned Helplessness .......................... 28
  Summary ................................******* 29

CHAPTER 3: METHODOLOGY .......................... 31
  Research Design ................................ 31
  Pilot Study .................................... 31
  Multiple Case Studies ......................... 33
  Selection of Participants ..................... 35
  Screening ..................................... 36
  Selection ....................................... 43
  Data Collection ................................ 47
  Initial Procedures ............................. 47
  Collection ..................................... 49
  Triangulation of Data Sources ............... 50
  Data Analysis .................................. 56
  Rigor .......................................... 58

CHAPTER 4: PHONICS INTERVENTION ............... 62
  Kyle's Tutoring ................................ 63
  Kyle's Comments ................................ 66
  Debra's Tutoring ................................ 66
  Debra's Comments ................................ 67
  Paula's Tutoring ................................ 68
  Paula's Comments ................................ 68

CHAPTER 5: CASE STUDIES OF DYSLEXIC COLLEGE
  STUDENTS ........................................ 70
  Categories ...................................... 71
  Todd ............................................ 72
  External Forces ................................ 73
ABSTRACT

The initial purpose of this study focused on an Orton-Gillingham phonics remediation program and the effect the program had on college students. The emphasis of the study changed due to the fact that the Orton-Gillingham phonics program did not impact the college students' learning, which was mainly due to the students having previously received some form of phonics instruction. The students had learned to compensate for their poor spelling ability through invented spelling, and the use of the computer and the spell checker. The other accommodations that decreased their need for knowledge of a spelling program were the use of a tape recorder, copy of notes, oral reader, and electronic dictionary. The students were more occupied with meeting the demands of college courses than learning a phonics program. The emphasis of the study changed, and the purpose evolved to acquiring a more concise understanding of the dyslexic college students' acquisition of knowledge. Data was collected and analyzed on five dyslexic college students in order to determine: (a) What enabled the dyslexic college students who were identified as being learning disabled to attain high school graduation and pursue college degrees? (b) How did each student compensate to survive in school? (c) How did reflective practice affect the dyslexic college students perception of themselves as
learners? and (d) What similarities and differences existed among the dyslexic college students? Through an in-depth description of five case studies, we received valuable insight regarding the survival tactics employed by these students. We learned how reflection can be employed by some students and the positive effects of such practices. A discussion of the similarities and differences of the students revealed that self-esteem, maturity, and motivation were the key factors for success.
CHAPTER 1
INTRODUCTION

Statement of the Problem

At one magical instant in your childhood, the page of a book - that string of confused, alien ciphers - shivered into meaning. Words spoke to you, gave up their secrets; at that moment, whole universes opened. You became, irrevocably, a reader (Manguel, 1996, flyleaf).

If only the effortless process which Alberto Manguel (1996) so eloquently describes as a student learning to read were true for all students.

In fact, according to Harris and Sipay (1985) 10% to 15% of the school children in America are reading disabled. Kitz and Nash (1992) are in agreement and state as many as 15% of school children and adults have reading problems. For the purpose of this study, the definition of a reading disability, specifically dyslexia, is based on The National Institutes of Health and National Orton Dyslexia Society's definition for dyslexia as per the brochure Center for the Study of Dyslexia Offers a Program to College Students with Dyslexia (1996):

Dyslexia is one of several distinct learning disabilities. It is a specific language-based disorder of constitutional origin characterized by difficulties in single word decoding, usually reflecting insufficient phonological processing abilities. These difficulties in single word decoding are often unexpected in relation to age and other cognitive and academic abilities; they are not a result of generalized developmental disability or sensory impairment. Dyslexia is manifested by variable difficulty with different forms of language, often including, in addition to problems in reading, a conspicuous problem with acquiring proficiency in writing and spelling.

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Some of these learning disabled students reach college and have tremendous difficulty comprehending written material because of their poor phonological processing.

**Phonological Processing Defined**

"Phonological processing has been conceptualized as encompassing at least three different components or skills: phonological awareness, typically assessed by phoneme deletion and rhyming tasks; phonological recoding in lexical access, which can be assessed by rapid naming tasks; and phonetic recoding in working memory, which can be measured by digit- and word-span tasks" (Lyon & Chhabra, 1996, p. 4). Disabled readers seem to have the greatest difficulty with phonological awareness, which is connecting the letter combination(s) with their sound(s), consequently making reading laborious and comprehension poor.

Phonological processing has been explained by Adams (1990) as the ability to identify the sound-symbol relationship, to identify beginning, ending, and medial sounds in a word, to join sounds together to make a word, to remove sounds to form a new word, and to combine words to make compound words.

Insufficient acquisition of language follows a child into adulthood. The students who experience difficulty in learning to read usually continue to experience reading
difficulty throughout their academic careers and thereafter (Scanlon & Vellutino, 1997).

Furthermore, learning disabled college students often excel verbally and/or in other academic areas, but their reading disability holds them back in reaching their potential, often destroying their self-esteem. Motivation is critical in order for these students to put forth the effort necessary to achieve academic success (Berninger, Raskind, McCutchen, Richards, Cunningham, Nolen, Wijsman, Dager, Corina, & Abbott, 1997).

Debra (pseudonym) stated, "I don't know why I’m in college. I want to be an occupational therapist, but I’ll never get accepted in the program. You know they only accept a few, and I'll never get in."

**The Purpose of the Study**

The purpose of this study initially was to examine the effect of an Orton-Gillingham multisensory phonics remediation program on learning and self-image in dyslexic college students. Early in the study it was obvious that there were several reasons why all of these dyslexic students had attained high school graduation and were furthering their education. All of the students had compensated for their poor phonological skills. Previously all had received some form of phonics instruction involving letter-sound recognition through repetition and drill, and two of the students had received instruction in syllabication as well. The survival...
tactic the students employed was invented spelling, and this was possible because of the phonics instruction. The students were able to take notes and read them. Most of the time I was able to decipher the words; however, if I could not, they could. These students also relied on accommodations to level the playing field. They generally received copies of the notes; in fact, in some classes they were able to purchase copies of the teachers' notes at a local copy shop. They were able to survive in most classes with their invented spelling, copy of notes, and use of the computer, spell check, electronic dictionary, oral reader, and extended time. This finding consequently affected the emphasis of my study. It was at this point that I allowed the study to lead me and evolve, and the study became primarily qualitative in nature. The emphasis shifted to acquiring a better understanding of the factors which enabled these dyslexic students to attain high school graduation and pursue college. I decided to continue the Orton-Gillingham (O-G) remediation phonics tutoring with three of the participants to determine if additional instruction had an effect at the college level.

According to Gillingham and Stillman (1960), Samuel T. Orton, a neurologist, and Anna Gillingham, an educator, began the work of organizing a remedial technique for students who were unsuccessful in reading and spelling. Bessie W. Stillman, an educator, soon joined Anna
Gillingham in her quest to develop the O-G approach for dyslexic students. O-G programs are sequential, systematic, cumulative phonics programs that are taught with direct instruction and the use of multisensory techniques. These programs begin with instruction emphasizing the parts of language that are easiest and most frequently used. It is through repetition, drill, and simultaneous involvement of as many of the senses as possible that mastery of the material is accomplished. Upon mastery, new material is introduced, gradually increasing to that which is more difficult. [Some examples are sound of single consonant where the sound that the letter makes is embedded in its name (such as f and l), advancing to vowel sounds, blends, general spelling rules, digraphs, diphthongs, syllable types.] The O-G program has been adapted for students of all ages.

This type of remedial deficit model of instruction has received substantial criticism and is often regarded as inappropriate (G. Rice, personal communication, April 30, 1997). It is imperative that a clear and precise distinction is made between those students with learning difficulties due to diverse cultures or inappropriate programs and those students with learning disabilities such as dyslexia. Direct instruction is not the pedagogy most appropriate for all students. Research, however, supports the idea that dyslexic students benefit from such a direct, remedial approach (Guyer, Banks, & Guyer, 1993;

The literature on dyslexic adults included a quantitative study which simply recommended early intervention with a phonics program (Lyon & Chhabra, 1996). Another study suggested a multisensory remediation program (Lesnick, 1987). Several of these studies specifically recommended a phonics program based on the methods of Samuel Orton and Anna Gillingham (Guyer, Banks, & Guyer, 1993; Guyer & Sabatino, 1989; Kitz & Nash, 1992; Lundquist, 1988). There appeared, however, to be a lack of qualitative research in the area of adult dyslexic college students.

The Setting

Study

The Center for the Study of Dyslexia is located in the education building on a university in the southeastern part of the United States. The participants, dyslexic college students, met for two hours a week during the fall semester in a small private office for the remediation, tutoring, interviewing, observations, and discussions on reflection. The small office contained a large L-shaped secretary's desk, two chairs, and a student's desk. It also included three wooden bookcases containing various books, papers, and computer software positioned on three different walls, one metal filing cabinet in a corner, a
window to the back of the tutor, and a computer and a telephone positioned to the side of the desk.

Some observations were conducted in the computer lab provided for the dyslexic college students. The lab is located directly next to the small private office. The computer lab contained one metal filing cabinet in the corner and four Macintosh computers, each with its own set of headphones and each on a separate desk positioned on one of the four walls. Next to each of the computers are an English handbook, an electronic dictionary, pencils, and pens. Rules and various inspirational sayings were posted above each of the computers. A clock was on the wall to the right above the printer, and hanging on the door were a calendar and a sign-in sheet.

The use of a video camera in documenting the study was requested. The participants felt very uncomfortable with the idea of being video recorded. They preferred the use of a tape recorder instead.

History of Center for the Study of Dyslexia

The Center for the Study of Dyslexia, created by special appropriation from the state lawmakers, opened October 15, 1992. Conscious of the needs of individuals with dyslexia, the legislators were also receptive to the request made by the university's president. Initially, the center consisted of just one office in the education building, but it now encompassed seven offices.
Funding. Funding for the Center for the Study of Dyslexia is provided by the university's operating budget. The Center operates on the same fiscal year basis as the university.

Responsibility. Housed within the College of Education, the Center has the state-wide responsibility for organized initiatives in instruction, service, and research. The areas of emphasis that have been addressed thus far by the Center are instruction and service. However, due to frequent turnover in the director's position, research has not been conducted in the Center.

In order to fulfill its purpose, the Center for the Study of Dyslexia disseminates up-to-date information about dyslexia to the public. The Center assists both public and private school systems within the state through in-service offerings and consultation with school personnel. It provides support and remediation services to its college students who have been identified as having dyslexia. It also supports the preparation of educators through undergraduate and graduate course offerings and non-credit workshops for clinic, school-based, or service center settings.

Significance of the Study

The five case studies provided valuable insight into the life of a dyslexic college student. The qualitative case study approach allowed for comparing and contrasting emerging themes and patterns, providing for a richer
understanding of the hardships and tribulations dyslexic college students encounter to attain a college degree, the various study skills used by students, the ability or inability as well as the depth of reflection on one's own learning, and the effect of a particular type of remediation for college students with dyslexia.

A pilot study was conducted in the spring of 1997 with two students enrolled in the Center. The students were screened for phonological processing disability through single-word decoding, spelling, reading, and comprehension. The study was conducted over a seven-week period. During the seven weeks, one student received the 0-G remediation along with the other services provided by the center, while the other student received only the services normally provided by the center. When the participant's scores were compared, the participant who received the 0-G remediation scored higher on all areas of the post-tests compared to her pre-tests scores, while the participant not receiving the remediation scored lower on three areas on the post-test compared to her pre-tests scores.

My goal was to conduct five case studies following a format similar to the pilot study, but over an extended period of time and with a larger number of participants. The main difference between the two studies was the switch to a primarily qualitative study allowing themes to emerge, thereby diminishing the need for administering and
comparing post-test scores because the emphasis was no longer on the phonics remediation program.

The research questions changed over the course of the study. Initially, the questions were:

**Research Questions**

1. Does an Orton-Gillingham based phonics remediation program enhance learning as reflected in spelling and comprehension abilities of college students who have been identified as being learning disabled?

2. How does each student compensate to survive in school now? How will this change over time based on the instructional strategies each will learn and practice over the course of the semester?

3. What similarities and differences exist between the dyslexic college students who receive phonics remediation with an Orton-Gillingham based approach and dyslexic college students who do not receive any phonics remediation?

As the study progressed, the questions were altered. The emphasis changed from a concentration on the effects of an O-G phonics remediation program to the survival tactics employed by the students to attain academic success. A more thorough explanation of the reasons for the change are discussed in Chapter 7. This study was to offer insight into how we as educators might learn to better serve and meet the needs of our dyslexic students.
Following are the research questions that emerged from the study.

**New Research Questions**

1. What enabled the dyslexic college students who were identified as being learning disabled to attain high school graduation and pursue college degrees? How did each student compensate to survive in school?

2. How did reflective practice affect the dyslexic college students' perception of themselves as learners?

3. What similarities and differences existed among the dyslexic college students?
CHAPTER 2
REVIEW OF THE LITERATURE

There have been numerous studies conducted in the area of dyslexic adults and/or college students (Bruck, 1987, 1993; Chall, 1987; Elbro, Nielsen, & Petersen, 1994; Frauenheim & Heckerl, 1983). The increase was partially based on the growing number of learning disabled individuals attaining academic success. The federal legislation of Section 504 of the Rehabilitation Act of 1973 (PL 93-112) also affects the increased numbers by mandating an equal opportunity for learning disabled students in colleges and universities that receive federal funds.

Focus

The literature focused on various elements pertaining to dyslexia. The first of these was concerning the existence of dyslexia as a separate and distinct reading disability. Debate continues over whether dyslexia actually exists as a separate disability different from other reading disabilities. Several researchers also questioned the use of intelligence (IQ) as a discrepancy factor in dyslexia. Another area researched was the etiology of dyslexia. There were also several quantitative studies done on appropriate or effective remediation strategies and on programs for adult students with dyslexia. Due to the growing concern for college students with dyslexia and effective interventions or
strategies implemented, research was conducted in this area as well. Additionally, numerous studies were performed on the deficits of dyslexic adults in comparison to dyslexic children. The term "learned helplessness" was reviewed. It was defined, and the characteristics associated with learned helplessness were discussed.

Debate

Existence of Dyslexia

The idea that developmental dyslexia is a disability distinct from other reading disabilities has been pondered for years. Originally, dyslexia was thought to be a deficit in visual processing. In 1935 Schonell hypothesized that there were two distinct categories under reading-disabled: specific reading retardation and general reading backwardness (Aaron, 1987). According to Aaron (1987), Davis and Cashdon identified three possible criteria by which dyslexia could be categorized as a separate and unique reading disability. It was believed that if dyslexia met at least one of the three criteria (etiology, prognosis, or response treatment) then it was distinct from general reading backwardness.

In 1973, Yule responded with large-scale studies and validated the existence of individuals with "specific reading retardation." Specific reading retardation was defined as poor reading ability with average or above IQ, opportunity for educational experiences, and adequate family-cultural opportunities. Consequently, several
studies have been conducted to determine the differences, if any, between those individuals labeled as dyslexic/specific reading retardates and those labeled as learning disabled (Bloom, Wagner, Reskin, & Bergman, 1980; Guthrie, & Seifert, 1978; Taylor, Satz, & Friel, 1979).

**Symptoms.** Much of the research was done in the area of the cause of dyslexia and its difference from other reading disabilities. Consequently, the most widely accepted view currently is that dyslexia is a language-based disorder, more specifically, a phonological processing deficit (Snowling, 1996). Phonological processing refers to the ability to manipulate language. Accordingly, the research findings indicated insufficient phonological processing as a symptom of dyslexia (Aaron, 1987; Aaron & Phillips, 1986; Bruck, 1993, 1992, 1987; Elbro, Nielsen, & Petersen, 1994; Frauenheim & Heckerl, 1983; Lyon & Chhabra, 1996; Snowling, 1996). In fact, the multidisciplinary longitudinal research studies [which the National Institute of Child Health and Human Development (NICHD) within the National Institutes of Health supported] indicated that deficits in phonological processing were the root of dyslexia (Lyon & Chhabra, 1996). The Early Interventions Project, a NICHD research project conducted by Foorman, Francis, and Fletcher (1997), stated that the source of poor reading is difficulty with linking letters with sounds. As cited in
Kitz and Nash's (1992) study, "Much of this research suggests that youths who are poor readers differ from their counterparts who read well in phonological awareness (Beech & Harding 1984; Fox & Routh 1975, 1976, 1980; Liberman 1973; Stanovich 1982)" (p. 4). Scanlon and Vellutino (1997) reiterated that converging research states that difficulty with the phonological component of language is the most common cause of early reading problems and that these students are less attuned to the phonemic structure of spoken language. In a study conducted by Nation and Hulme (1997), it was found that the best predictor of both spelling and reading ability was phonemic segmentation. Torgesen (1997) refers to the primary inhibitor in children's ability to comprehend and enjoy written material as the difficult and usually inaccurate method by which they identify words in print.

**Medical evidence.** Hynd (1995) reported on a study of magnetic resonance imaging scans that were conducted on children with dyslexia and a matched sample of children identified as being normal. The findings concluded that the anterior region of the corpus callosum (the genu) was significantly smaller in the dyslexic subjects than in the normal subjects. It was also noted that a significant correlation existed between reading achievement and measurements of the region of interest. Furthermore, chronological age, measured intelligence, and gender were
not related to the region of interest measurements of the corpus callosum.

Lyon (1995) reported on the studies supported by the NICHD. The Bowman Gray School of Medicine found that deficiency in word-recognition skills was associated with reduced blood flow in the left temporal region. According to Lyon (1995), both the Beth Israel Hospital and Harvard Medical School reported "...atypical neural organization in dyslexic individuals is suggested by absence of the normal left-greater-than-right asymmetry in the region of the posterior temporal planum" (p. S125), which is located above the left ear. This is where verbal processing during reading occurs and the incoming auditory information connects with visual information. Normally, there is a "left-greater-than-right asymmetry" in this portion of the brain, but in dyslexic individuals this does not seem to hold true. Furthermore, Beth Israel Hospital, Harvard Medical School, and Bowman Gray School of Medicine found, "...the phenotypic expression in dyslexia is related to anomalous organization of tissue and processing systems subserved within the posterior left hemisphere" (p. S125). This reiterates the previous statement concerning the left temporal planum.

Studies conducted at the University of Colorado concluded there was strong evidence for genetic etiology of reading disabilities. In fact, the greatest degree of
heredity was found among participants with deficits in phonological awareness (Lyon 1995).

Ten-Year Study

In pursuit of a homogeneous group and taking a closer look at identifying the specific areas that cause problems for college students with dyslexia, Aaron and Phillips (1986) conducted several research studies on dyslexic college students over a period of ten years and compiled the findings. Each study was conducted with a small number of subjects in order that they would be more intensely studied. Reading comprehension scores varied greatly among the 20 subjects: while some students' comprehension was severely affected, others' was not.

The data that Aaron and Phillips (1986) collected indicated the following four symptoms of dyslexia: slow reading rate, inaccurate oral reading, poor spelling capability, and grammatical errors in written expression. The slow reading rate was mainly a result of the inability to decode unfamiliar words. The adults misread content and function words regardless of whether they were isolated or in context. There were no exceptions to the finding that all of the dyslexic adults were poor spellers, especially in regard to complex sounds and application of spelling rules. The errors that were made in writing were similar to the errors made in oral reading; however, they were not present in samples of spoken language (Aaron & Phillips, 1986).
Distinctly Different Reading Disability

Furthermore, Aaron (1987) conducted a study to determine if the etiology of developmental dyslexia differed from that of other reading disabilities. The subjects consisted of two groups of dyslexic college students and a control group containing normal undergraduate readers. The two dyslexic groups were divided by IQ scores. One group titled Dyslexic contained students scoring 95 and above on the Wechsler Adult Intelligence Test (WAIS). The second group was titled the Nonspecific Reading-Disabled Group (NSRD) and had IQ scores of 85 or below on the WAIS.

Aaron's (1987) hypothesis that the etiology of dyslexia was different from that of other forms of reading disability is based on the idea that different components malfunction in each. It was also hypothesized that the etiology of dyslexia was poor grapheme-phoneme association or decoding and that the etiology of the NSRD group was poor comprehension. Aaron was also interested in determining if IQ was a defining criterion for identifying dyslexia. This was the major reason for dividing the two dyslexic groups based on IQ scores.

The students were required to decode and recall from memory words or nonsense words projected on a screen. They had to read for comprehension, read when comprehension was not necessary, then read pairs of sentences and stress various words in the sentences to
ensure meaning. The students were required to repeat a sentence as they heard it. They listened to a sentence and extracted meaning from syntactically complex sentences. It was also necessary to determine if the students made use of contextual aids.

The results indicated that the dyslexic group was significantly worse than the other two groups in decoding. The NSRD group's reading speed was significantly depressed when comprehension was required. The other two groups were not affected. As expected, the dyslexic group continued to have difficulty with decoding regardless of the comprehension factor.

The scores that indicated stress and pronunciation were similar for all three groups; in fact, the dyslexic and control group barely differed at all. All three groups scored similarly in the ability to provide appropriate function words or suffixes. The dyslexic and control groups' listening comprehension scores were very similar and considerably higher than the NSRD group. The control group produced very few oral reading errors; however, both the NSRD group and the dyslexic group made oral reading errors, though they differed on the type of errors committed. The dyslexic group made more errors with content words and function words than the NSRD group; however, the dyslexic group made few neologisms or constructed only a few new words. While the NSRD group...
made some errors with content words and function words, they constructed more neologisms than the dyslexic group.

Aaron (1987) concluded that while poor decoding skills were found to be a symptom of developmental dyslexia, a general cognitive deficit was found to be the underlying cause of performance in the NSRD group. The dyslexic group was deficient in decoding while the NSRD group was deficient in comprehension (Aaron, 1987).

**Remediation Programs**

Meeting the college student's accommodations mandated by the federal legislation was not sufficient in bringing the student up to his potential. Consequently, quantitative studies were conducted to identify an appropriate remediation program for dyslexic adults. A closer view was taken to determine if there was a difference in remediation for dyslexic adults compared to children with dyslexia.

Phonics programs (Appendix A) was developed to compare the various remediation programs addressed in the literature. The programs include Alphabetic Phonics, Wilson Reading System, Simultaneous Multisensory Phonics, and Project Success. A brief discussion of the program at Landmark College is noted.

**Phonics**

Lyon and Chhabra (1996) specified early intervention of a direct, definite approach in phonemic awareness along with instruction in sound-symbol relationships through a
phonetic method of instruction. They recommended direct instruction of a phonics-based program at an early age, emphasizing the importance of letter-sound association and the ability to manipulate the language. This was mainly due to the findings of serious deficits in phonological processing skills. The treatment studies that Lyon and Chhabra (1996) reviewed indicated that some students were "resistant" to the remediation and further research was needed to take a closer look at each student.

**Alphabetic Phonics**

Guyer and Sabatino (1989), concerned about the success of learning disabled college students, were particularly interested in studying remediation methods with dyslexic adults. As a result, they conducted a quantitative study with 30 learning disabled students at Marshall University.

The 30 subjects in Guyer and Sabatino's (1989) study all scored average to above average IQ based on the Wechsler Adult Intelligence Scale-Revised. The students were randomly divided into three groups, the first group a control group receiving no remediation, the second group receiving remediation in a multisensory Alphabetic Phonics (O-G based) approach, and the third group receiving intervention of a nonphonetic program.

Alphabetic Phonics was developed by Aylett R. Cox (1995) and her staff at the Texas Scottish Rite Hospital for Children in Dallas, Texas. The program was adapted,
structured, and modified based on the original O-G approach for teaching phonics and the structure of the written English language. The program teaches the alphabet, dictionary skills, reading accuracy, spelling, cursive handwriting, listening and reading comprehension, and expression through the use of visual, auditory, and kinesthetic modalities simultaneously. The program can be taught to small groups or individually in daily one-hour sessions.

In Guyer and Sabatino's (1989) study, statistically significant gains in reading were found with the college students who received remediation in the O-G approach compared to the other two groups. There was no statistical difference between the other two groups.

Wilson Reading System

Another study was conducted with the Wilson Reading System. Guyer, Banks, and Guyer's (1993) study consisted of three groups of students. One group received remediation in a modified O-G phonics program. A second group received instruction in a non phonetic spelling approach. The third group, the control group, received no remediation.

The Wilson Reading System is a multisensory phonics approach that teaches the sound-symbol relationship of the 26 letters of the alphabet and its respective 44 sounds. Students learn and associate unknown sounds with concrete objects. Once the sounds are learned, practice proceeds
with the six syllable types, then syllable division rules, and eventually the rules for adding prefixes and suffixes. The program provides opportunities for the students to read, spell, and apply the rules in writing exercises.

Guyer, Banks and Guyer (1993) found significant gains in the spelling performance of the first group who received the O-G remediation. There were no significant gains in either of the other two groups. It was concluded that dyslexic adults could benefit from the appropriate remediation program.

**Multisensory Phonics**

Lesnick (1987), an associate professor of English at a community college in the Bronx, was concerned with unsuccessful dyslexic college students. Lesnick (1987) found that those students who had dyslexia-related problems and were unremediated and undiagnosed, "account for a disproportionately large percentage of failures and dropouts" (p.42) in open-admissions colleges. Unfortunately, the traditional developmental programs employed in colleges were not nearly as effective for students with dyslexia as with other students.

The suggested form of remediation for dyslexic college students according to Lesnick (1987) was a simultaneous multisensory phonics program that focused on decoding and encoding. It was believed that basic phonics and word attack skills as well as the morphologic rules had to be taught. After the writing process was
explained, demonstrated, and practiced, the students needed to meet with success early in the program. Success was a crucial factor in order for these students to be motivated and continue the program due to the fact that they had already met with a great deal of failure and frustration in the classroom.

Project Success

Nash (Lundquist, 1988) was the Director of Project Success at the University of Wisconsin at Oshkosh and developed the Simultaneous Multisensory Instructional Procedure for Teaching the Complete Sound Structure of the Language (SMIP for TCSSL). This approach was O-G based.

A review was conducted on Project Success in order to find out more about its successful program of remediation. Nash reported (Lundquist, 1988) that 80% to 84% of students in Project Success earned either Baccalaureate or Associate of Arts degrees, or attended the university for two or three semesters and then moved on to finish in vocational or technical programs.

According to Nash (Lundquist, 1988), the achievement of Project Success was based on an intensive eight-week summer remediation program in reading, writing, spelling, and talking. This program, SMIP for TCSSL, was a method for the "inexperienced language learner who is deficient in reading and spelling skills" but "can learn the language's sound symbol assignment by way of a simultaneous utilization of his visual sense, auditory
sense, and kinesthetic-tactile sense" (Lundquist 1988, p. 17). The students also participated in an on-campus Toastmaster's club. The Toastmaster's club provided an avenue for the students to practice their social skills. A writing and math clinic was available for students as well.

**Study of Project Success**

In 1992 Kitz and Nash conducted a study on 63 dyslexic college students attending the Project Success Summer Program. Upon completion of the eight-week intensive remediation program, the data indicated significant improvements in the subjects' reading of individual words, spelling, and comprehension. Consequently, this research reinforced the belief that multisensory phonics instruction did benefit adults. However, phonics was not the only component emphasized in the program. Study skills, written expression, and comprehension strategies were stressed as well. Also noted was that the teaching methodology used was direct instruction of small groups of 7 to 18 students.

**Landmark College**

Bolaski & Gobbo (1991) reviewed Landmark College, a small college in Vermont specifically established for dyslexic college-aged students, which has long been interested in meeting the needs of dyslexic adults. Landmark based the success of its program on teaching students language skills, personal awareness, study

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skills, and active involvement in their own learning. The student-faculty ratio was extremely low, the students were required to live on-campus and to spend 25 hours a week in class, and they had 20-30 hours of homework per week. The program accentuated the students' strengths, focused on study skills, and addressed social skills. Landmark College provided the students with the opportunity to receive supportive learning and attain academic success.

**Comparing Dyslexic Adults**

**Graduating Versus Not Graduating**

Vogel and Adelman (1990) conducted a study comparing LD college students with non-learning disabled college students between 1980 and 1988. The LD students graduated at the same rate and within the same time frame as the non-LD students even though the LD students' high school records, ACT scores, and college performance were lower than the non-LD students.

Vogel and Adelman (1990) also took a closer look at the LD students who graduated compared to the LD students who experienced academic failure. What they found was a marked difference between the students' oral language and articulation abilities, and their attitudes and motivations toward the learning process. In other words, the success of the graduated LD students was a result of a positive attitude toward learning.
Adult Versus Child

Adult literacy, a problem which Jeanne Chall (1987) discussed, changed over the years, and many educators did not know how to address it. Instead of just meeting the needs of basic functional literacy, adult literacy has expanded to a high technical level of about a 12th grade reading level. This was mainly due to our changing economic structure from traditionally skilled work in heavy industry to a new electronic industry.

Chall (1987) believed that many of the illiterate adult native-speaking English citizens with limited reading skills were dyslexic. According to Chall (1987), the process of reading development for adults with dyslexia was relatively the same as for all children. The differences existed in how quickly they progressed based on each person’s ability, schooling, environmental factors, and if and how one interacted with each of the elements mentioned. Instructionally, the main difference between children and adults was the level of appropriate content materials. Otherwise, the first stage was recognizing words in print, and those who had difficulty with the tasks lacked the understanding of the alphabet or the sound-symbol relationship. According to Chall, the recognition of words in print was what kept all children and adults illiterate.

Chall disagreed with those who argued that adult illiterates lacked the concepts, motivation, and ideas to
read. She supported the statement with referral to earlier studies (Anderson, Hiebert, Scott, & Wilkinson 1985; Chall, 1983) "that early systematic teaching and learning of word recognition and decoding produces better results than emphasis on meaning" (Chall, 1987 p.245).

Chall (1987) further observed that illiterate adults have had experiences and developed language but still cannot read. Another similarity that Chall (1987) found in both children and adults was the feeling of failure, a result of the individual not achieving in school. This feeling of failure was even greater in the adult than the child as based on all the years of being unsuccessful in reading.

**Learned Helplessness**

"The term 'learned helplessness,' first introduced by Seligman and Maier in 1967, has become a label applied by different researchers to syndromes of behavior that seem to overlap partially in terms of behavioral characteristics (Luchow, Crowl, & Kahn, 1985, p. 470)." According to Luchow, Crowl, & Kahn (1985), most researchers agree the salient characteristic of learned helplessness is an insufficient tenacity at tasks which realistically could be mastered. It is also agreed that those who exhibit learned helplessness do so as a result of repeatedly experiencing failure.

McKean (1994) discussed learned helplessness and its effects on academic performance at the college level. He found learned helplessness may affect the students'
academic performance in three ways. "Behaviorally, it may be associated with academic procrastination. Cognitively, it may be associated with decreased success in courses, as reflected in a lower GPA. Effectively, it may be associated with a greater tendency to experience dysphoria" (McKean, 1994, p. 459).

It was also found by Abramson, Seligman, & Teasdale, (1987) that when students with learned helplessness experience an academic setback they allow it to deplete their self-efficacy and self-esteem. It was also found that the students experience an increase in frustration when they encounter an academic misfortune.

According to Ganz and Ganz (1988), learned helplessness student have not become innately proficient with solution-oriented strategies, so they quit. They often say things similar to "I can't do this. I'm not smart enough" (p. 82).

Summary

The identification and defining of dyslexia as a separate reading disability has been pondered for years. There is now a growing debate over the use of IQ scores as a discrepancy factor in the defining of dyslexia.

Most reading educators agree that insufficient phonological awareness is a common characteristic among dyslexic children and adults (Aaron, 1987; Aaron & Phillips, 1986; Bruck, 1993, 1992, 1987; Elbro, Nielsen, & Petersen, 1994; Frauenheim & Heckerl, 1983; Kitz & Nash,
1992; Lyon & Chhabra, 1996; Snowling, 1996). Most of the researchers are in agreement in regard to phonics being the appropriate remediation program for dyslexic adults, but that seems to be where the agreement stops. According to the literature, the major differences that existed among the phonics remediation programs were whether the program included multisensory techniques or whether the program was sequential, systematic, and cumulative.

Learned helplessness is a behavior characterized by academic procrastination and giving up on tasks which could typically be completed. This behavior is the result of a student repeatedly experiencing academic setbacks.
Yin (1994) suggested the use of a pilot case study in order to assist the researcher in refining data collection plans, procedures, and clarification of research questions. The pilot study helped to focus and discover questions through the analysis of initial field data collected (Spradley, 1980). A pilot study, conducted for seven weeks in the spring of 1997, was conducted with two dyslexic college students enrolled in the Dyslexia Center.

Several factors were controlled in the participant selection. Both participants were females with very similar educational backgrounds, appearances, and social economic status. One was 18 years old, the other 19. Both had previously attended the same support program in the same high school. During the pilot study, one participant received only the support services offered by the center while the other student received the support services and an O-G remediation program for an hour once a week. Similar types of data were collected on both participants. Screening measures were conducted on both students to determine phonological awareness, single-word identification, oral reading, reading comprehension, and spelling ability. The students participated in interviews, observations, and reflective practices.
The reflective practices consisted of the participants expressing verbally or on paper how they managed, studied, reacted, and compensated in order to meet the academic demands of college life. It was through these reflective experiences that I realized the necessity of the self-esteem screening to more closely match the participants. One of the findings in the pilot study was the identification of self-esteem as a major factor related to the academic success of the student. Typically, these students have developed poor self-esteem based on the difficulty they have experienced in school and with school-related activities involving teachers, parents, siblings, and peers.

Alternate forms of the screening instruments were administered as post tests at the end of the seven weeks, and the individual participant's scores were compared. The participant who received the O-G remediation scored higher on all areas compared to her pre-tests scores, while the participant not receiving the remediation scored lower on three areas of the post-tests compared to her pre-tests scores.

A change in the study based on the results of the pilot study was the implementation of the Self Description Questionnaire (SDQ III) (Marsh, 1989), which is a self-esteem test. The SDQ III was added to the screening in order to more closely match the participants' self-esteem. Several procedural changes were also made, the first
involving five participants instead of two and the second increasing the duration of remediation and data collection from seven weeks to fifteen weeks. These changes were made to strengthen the reliability of the study.

It was also noted that the participants would be required to participate in more reflective thought processes. The students would be given notebooks to record their reflections, and the modeling of the thought process would be conducted by the researcher.

Every effort was made to closely match the participants; therefore, two screening instruments were added to the study that were not used in the pilot. The Gray Oral Test and the vocabulary section of the Stanford Diagnostic Reading Test were the two instruments added to the study to more closely match the participants in their reading, comprehension, and word identification skills. These screening instruments were each administered twice, further ensuring reliability.

**Multiple Case Studies**

Descriptive multiple case studies were conducted on five dyslexic college students enrolled in a support center at a public university in southeastern United States. Initially the study was going to consist of mixed methodology with an emphasis on the effects of the O-G remediation program. The study originally was going to contain both quantitative and qualitative methodology. As the study progressed, the qualitative aspect of the case
studies remained; however, the quantitative component of comparing the students' pre- and post-test scores based on the O-G remediation program became irrelevant. The O-G phonics remediation did not impact the students' learning; therefore, a comparison of the students' scores was eliminated from the study. The study became primarily qualitative in nature. The interest was in acquiring an understanding of how these students had achieved high school graduation and were pursuing college degrees. The emphasis of these multiple case studies also focused on the reaction of dyslexic students to college academics. Observations were conducted and data collected on the students' ability to reflect on their own learning. The similarities of and differences between students were noted as well. The case study format permitted one to view and explain the methods and reasons things occur; it allowed an investigation in which the real-life events and holistic characteristics were retained. The case studies favored the use of direct observation and systematic interviews, which were essential components of this research. The various data sources were analyzed as themes and patterns emerged.

Primarily, my role was participant observer while studying and working with the students using study skill techniques, demonstrating organizational strategies, and implementing time management. These various opportunities allowed me to gain valuable information about them. I
also conducted numerous interviews, both formal and informal, with the participants, thereby providing a wealth of knowledge.

Selection of Participants

At the beginning of the 1997 fall semester, six participants were initially selected from the dyslexic college students enrolled in the Center for the Study of Dyslexia. Unfortunately, one participant dropped out of the university and was unable to continue the study. He had spent the summer working as a chef at a local restaurant and had truly enjoyed the experience. Initially, he was going to continue his job in the evenings and on weekends and attend school during the weekday. As the semester began, he realized he preferred making money and cooking, an enjoyable task, rather than attending school, which was not always enjoyable. There was even a possibility that he might relocate and assist with the opening of a new restaurant. He was earning money and enjoying what he was doing, unlike the experience he had trying to meet the academic demands of college. Consequently, he chose to withdraw from the university.

The selection of participants was an example of purposeful sampling (Patton, 1990). Prior to entering the Dyslexia Center at the university, all participants had been determined eligible for the program based on private
evaluations. The students, along with parents, had also completed the interview procedure required by the center.

Nine American dyslexic students were screened. The nine chosen for the screening were from similar socio-economic family backgrounds. Of the nine, five were single white males and four were single white females, their ages ranging from 19 to 23 years. Specifically, the subjects were one 23-year-old female, two 21-year-old males, two-20-year old females, three-20-year old males, and one-19-year old female. All nine students participated in the first screening and interview process. The interviews were reviewed, and commonalties and exceptions noted. The students' screening scores were analyzed to determine those students who were most similar in phonological processing, spelling ability, single word decoding, and comprehension ability. Another factor that played an important role in participant selection was their scores on the SDQ III. The self-esteem test was added to assist in more closely matching the participants. The findings in the pilot may have been affected by the extremely diverse students' self image.

Screening

Several different screening instruments were administered to the students in the study. The Gallistel-Ellis Test of Coding Skills (Gallistel & Ellis, 1974) measured the decoding of real and nonsense words in isolation through a written spelling component and an oral
reading component. The phoneme awareness component of this instrument was also administered orally. The test was retyped to separate the even-numbered and odd-numbered items. The odd-numbered items were administered during the initial screening, and the even-numbered items were administered during the second screening.

The Gray Oral Reading Test (Bryant & Wiederholt, 1991) and the vocabulary section of the Stanford Diagnostic Reading Test (Karlsen & Gardner, 1996) were each administered twice. First, one form of the tests was administered according to the directions specified in the manual. Then another form of the tests was read orally to the student. A comparison of the students' scores was analyzed in order to determine if the oral reading made a difference in their scoring.

The Gray Oral Reading Test measured the accuracy of passage reading and passage comprehension. Form A of the test was administered first as the instructions indicated by having the student read the passages orally and mark the answers to the questions. Form B of the test was then administered to the student by having the student listen to an oral reading of the passages and questions and then respond.

The Blue Level of the vocabulary section of the Stanford Diagnostic Reading Test measured the students' verbal comprehension. Each student first read the text of Form J on his own, as directed by the manual, and marked a
choice. Then the participant listened to an oral reading of Form K of the test and marked a choice.

The students were also administered the Self Description Questionnaire III. The SDQ III contains 136 items that measure 13 self-concept facets, including Math, Spiritual Values/Religion, General-Self, Honesty, Opposite Sex Relations, Verbal, Emotional Stability, Parents Relations, General Academics, Problem Solving, Physical Appearance, Same Sex Relations, and Physical Ability. The questionnaire is based upon the Shavelson model of self-concept, a multifaceted, hierarchical model of self-concept that "...reviewed well known criteria for evaluating the measurement of self-concept" (Marsh, 1989, pg. 5). The SDQ III questionnaire was retyped due to the excessively small print, which was extremely difficult to read.

These screening instruments were administered to each student in August during the first week of the 1997 fall semester. The results were reviewed and analyzed to determine which of the students would participate in the study. Those participants who scored closest to the mean the majority of the time were chosen as participants for the study, as explained in detail in the section titled selection.

The screening instruments were re-administered individually to the six chosen participants in August during the second week of the 1997 fall semester. The
administering of the pre-test twice was to further ensure reliability of the students' scores. The students' first and second screening scores were compared. Their scores remained fairly consistent. For the most part, the students' two pre-screening scores fluctuated only several points. Paula's two screening scores varied the most: her total spelling score on the Gallistel Ellis increased 11 percent on the second screening.

The students' scores on the SDQ III appeared to vary more than a few points; however, the standard deviation (SD) for each of the 13 facets of the SDQ III was also more than a few points. The scoring for the SDQ III was divided into men less than 21 years of age, men older than 21 years of age, women less than 21 years of age, and women more than 21 years of age. The SD for the 13 facets of the SDQ III for men less than 21 years old ranged from 6.1 for appearance to 22.2 points for religion; for men older than 21 years, it ranged from 8.8 for honesty to 21.9 for religion; for women less than 21 years old, it ranged from 8.6 for emotional to 16.2 for verbal; and for women older than 21 years, it ranged from 8.8 for honesty and 19.0 for religion. Dustin's academic score on the second SDQ III increased 12 points and his emotional score 13. These fluctuations were either below the SD or within a few points of it. The students' SDQ III total scores depicted the largest fluctuation in points between the two screenings. Debra's score decreased 32 points, and
Paula's score decreased 29 points, while Dustin's score increased 34 points, Kyle's score increased 20 points, and Todd's score rose 16 points. The students' total scores fell between 761 and 845 points, and SD for the total score for each of the groups of men and women were all in the 80s. Consequently, the students' score fluctuations were well below the SD. There was also consistency in that all of the participants' total scores fluctuated between the SDQ III screenings. Refer to first and second screening scores compared (Appendix C) for a chart depicting the participants' scores.

The participants were administered the Gray Oral and the vocabulary section of the Stanford Diagnostic Reading Test using two methods. First, they were administered the tests on their own as the manual stated. Then the second form of the tests was read orally to each student. The participants' scores for the two different procedures were charted and compared as screenings read by student versus read to student (See Appendix D). The participants were also asked to comment on the method they preferred.

Todd preferred to read independently the vocabulary section of the SDRT because he found the oral reading to be a distraction. He did not feel the same for the passages in the Gray Oral. He preferred to have the selections read orally so that he could follow along and "picked out the important points and wasn't guessing as much." Contradictory to his belief, his vocabulary score
for the first screening was 3% higher when it was read to him; however, his vocabulary score for the second screening was 6% higher when he read it on his own compared to when it was read to him. The second screening score was in accordance with his beliefs. The Gray Oral scores increased for both screenings when the passages were read orally compared to when he read them on his own. He scored 16% higher on the initial screening when it was read to him compared to the oral reading. He scored 4% higher on the second screening when it was read to him in comparison to reading it on his own. Todd scored higher three of the four times when the material was read to him compared to him reading independently. Only once was his score higher when he read, and that was on the second screening of the SDRT test. He benefited from the oral reading.

Kyle preferred to have the vocabulary section of the SDRT read to him instead of reading it on his own, on the other hand, he preferred to read independently the passages for the Gray Oral. For the most part his scores were in accordance with his thoughts. He had the same score on the initial screening of the SDRT regardless whether he read it or the information was read to him. On the second screening, he scored 20% higher when the vocabulary section was read orally compared to his reading the tests. He scored higher on both screenings of the Gray Oral when he read the passages compared to having
them read orally. In other words, Kyle scored higher on two of the tests when he read the material. There was not any difference noted between the two methods on the first screening of the vocabulary section of the SDRT. Thus, his score remained the same. The only time Kyle's score increased when the material was read to him was during the second screening of the SDRT. The oral reading did not assist Kyle with his passage comprehension.

Dustin believed, "It didn't matter if I read it or listened to it." He thought the difference was in the difficulty of the level of words in the different forms of the tests. The words he listened to were "easier and simpler words than the ones he had to read." Dustin scored higher on both screenings of the SDRT and the Gray Oral when the information was read to him compared to him reading it on his own. It was also noted that there was a decrease in all of these scores on the second screening compared to the first screening. The oral method of testing was beneficial for Dustin since he scored higher on all four of the tests when the material was read to him.

Debra definitely preferred when the material was read to her, "because I know it was said right." Debra scored in accordance with her thoughts. Her scores on the initial screening increased 4% on the Gray Oral when it was read to her. Debra's vocabulary score on the SDRT increased 3% when the tests was read to her. On the
second screening she raised her Gray Oral score by 8% when the passages were read to her and increased the vocabulary section of the SDRT 7%. Debra appeared to be an auditory learner. She scored higher on all four tests when the material was read to her.

Paula also preferred having the tests read aloud compared to independently reading the information. Her vocabulary scores on the SDRT were higher during both screenings when the information was read to her compared to her independently reading the material. The comprehension score on the Gray Oral on the first screening was 8% higher when she read the passages compared to listening to the passages. This was not true for the second screening. Instead, her score increased 12% when the selections were read to her compared to her independently reading the passages. Consequently, three out of the four times she scored higher when the material was read to her.

Selection

In participant selection, I attempted to control several factors. The six students selected were as similar as possible in their phonemic awareness skills, ability to decode single words, ability to comprehend, and self-perception. After averaging the mean, I noted which of the participants' scores were closest to the mean the majority of times. Only four scores were highlighted for the screening of the SDRT when the vocabulary was read to
them due to the fact the fifth and sixth persons' scores were tied. The six participants chosen for the study were Debra, Dustin, Nolan, Kyle, Todd, and Paula (all pseudonyms).

Debra received 14 scores closest to the average on the screening scores. These scores were on the Gallistel-Ellis reading total and sound total, and on the Gray Oral passage comprehension when read on her own and when the text was read to her. The difference between the two methods of testing (reading the passage on their own versus having the passage read orally) was calculated and an average was determined. Debra was one who scored nearest the average on the calculated difference. She also had an average score on the number of oral deviations on the Gray Oral. On the vocabulary section of the Stanford Diagnostic Reading Test (SDRT), she had a score closest to the average on both methods of testing, as well as when the material was read by the student and when the material was read orally to the student. The difference between these two methods of testing was calculated and an average determined. Again Debra scored nearest the average on the difference. On the SDQ III she scored closest to the average on the academic section, general section, verbal section, emotional section, and total score. In fact, out of the 15 scores averaged, Debra scored closest to the average all but once. The only
screening component she did not score closest to the average was on the spelling total for the Gallistel-Ellis.

Dustin received 12 scores closest to the average out of the 15 screening scores averaged. The tests which he scored nearest the mean were on the Gallistel-Ellis total scores for the spelling, reading, and sound sections. He scored nearest the mean on the difference between the methods of testing for the Gray Oral passage comprehension. Dustin also scored closest to the average on the number of oral deviations on the Gray Oral. On the SDRT he received scores closest to the average on both methods of testing (reading the vocabulary on his own and having the vocabulary read orally). The difference between the two methods was calculated, and he scored closest to the mean. On the SDQ III he scored closest to the average on 4 out of the 5 sections reviewed. They were on the academic, general, emotional sections, and on the total score.

Nolan received 14 scores closest to the average out of the 15 screening scores reviewed. The only screening score that he did not score nearest the mean was on the sound total of the Gallistel-Ellis. Unfortunately, he did not remain at the university and dropped out of the study, as previously discussed.

Kyle earned a score nearest the mean 9 out of the 15 scores. The nine scores were on the spelling, reading, and sound totals on the Gallistel-Ellis; the passage
comprehension on the Gray Oral when the material was read orally; the number of oral deviations on the Gray Oral; the vocabulary section of the SDRT when the test was read orally; and the academic and general sections, and total scores on the SDQ III.

Todd had 7 out of the 15 scores closest to the average. The seven scores were on the sound total of the Gallistel-Ellis; passage comprehension of the Gray Oral when the material was read by the student and when the material was read orally; difference calculated between the two methods of testing on the Gray Oral passages; difference calculated between the two methods of testing on the vocabulary section of the SDRT; and the general and verbal sections of the SDQ III.

Paula received 8 out of the 15 scores closest to the average. The eight scores were on the spelling total of the Gallistel-Ellis; passage comprehension of the Gray Oral when she read it on her own; vocabulary section of the SDRT when she read it on her own; difference calculated between the two methods of testing on the SDRT; and the academic, emotional, and total scores on the SDQ III.

Anne (pseudonym) was eliminated as a participant because she had a total of only two scores closest to the mean, was older, and from a different socio-economic background, and had the lowest SDQ III total score. Kelly (pseudonym) received the second to lowest total score on
the SDQ III and had only five scores closest to the mean, while Toby (pseudonym) had only 3 scores closest to the average even though he received a high total for the SDQ III total score. Refer to participation selection (Appendix B).

**Data Collection**

The timeline depicting data collection and analysis for this qualitative study is presented in Table 3.1.

**Initial Procedures**

As Spradley (1980) advises, permission from each of the participants was obtained. Refer to student permission letter (Appendix E). A full explanation of the purpose of the study and the procedures was discussed with each of the students. Nine students volunteered to participate in the screening.

Each of the students received a stipend for participating in the study. This was decided approximately two weeks into the study to ensure attendance and relieve additional stress caused by having to continually call and remind them of their scheduled appointments.

**Ethics**

In coherence with The Belmont Report: Ethical principles and guidelines for the protection of human subjects of research (1979), the LSU/PBRC: Human Research Subjects application for exemption from institutional
oversight (Appendix F), and the Nicholls State University Human Subjects Institutional Review Board, the HSIRB (Appendix G) were approved.

<table>
<thead>
<tr>
<th>Procedures</th>
<th>Dates</th>
<th>Objective</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry Permission</td>
<td>Summer 1997</td>
<td>Obtain Permission</td>
<td>Forms</td>
</tr>
<tr>
<td>Fieldwork</td>
<td>Fall Semester</td>
<td>Accumulate Data</td>
<td>Interviews, Observations, Meetings, Evaluations, Remediation, Tutoring, Reflection, Demographics, Member Checking, Peer Debriefing</td>
</tr>
<tr>
<td>Data Collection</td>
<td></td>
<td>Emerging Themes Immersion</td>
<td>Taxonomic Analysis &amp; Componential Analysis, Constant Comparative Analysis, Member Checking, Peer Debriefing, External Auditor</td>
</tr>
<tr>
<td>Writing</td>
<td>Spring</td>
<td>Finished Product</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.1  
Timeline of Procedures for Data Collection and Analysis

Every effort was made in this research study to address the ethical issues of the individual rights to

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privacy, confidentiality, and avoidance of harm (Yin, 1994). The students were all voluntary participants informed of the purposes of the study, and their identity remained confidential throughout the study.

Collection

As investigator, I observed, interviewed, and worked with the students for several hours each week during the 1997 fall semester. Each participant had a regular two-hour weekly meeting with me. Three of the participants chose to split the meeting over two one-hour sessions, while two of the participants chose to meet once per week for two hours. The three participants choosing to split their meeting time were the three who received the 0-G remediation. Consequently, approximately 45 minutes were devoted to study skills and strategies, 45 minutes to the 0-G remediation, and 30 minutes to directed reflection and questioning. The other two participants received about one and one-half hours of study skills and strategies instruction and demonstration and approximately 30 minutes of directed reflection and questioning.

All of the students were encouraged to come into the center more often and take advantage of the services offered. Several of the participants took advantage of the support services provided, while others came in only during their scheduled time.
**Triangulation of Data Sources**

The qualitative data sources consisted of interviews with the participants, private evaluations, demographic questionnaires, and reflections as well as observations during tutoring, remediation, interviewing, and reflections. The participants' school work during the semester of study was also compiled and analyzed. Additionally, information from a key informant was collected. The key informant was the other assistant who worked with the students in the center. The data sources were triangulated to further ensure reliability of the study.

**Support Program**

All participants received the services provided by the Dyslexia Center. These services included instruction in effective study skills, time management strategies, long-range planning guides, tutoring in content areas, assistance with course work, and the use of computers. Another service provided to the students was the opportunity to come into the center to develop and type English essays on computer. The typical process for constructing essays began with the student brainstorming a topic both orally and on paper. Next, the student developed an outline, typed the paper, listened to it read by the computer, and edited the paper. The paper was then read aloud by Randy (pseudonym), a staff member in the center, and the student edited the paper a final time.
Remediation

Three participants received remediation once a week for 40-45 minutes for 15 weeks. The tutoring involved an Orton-Gillingham multisensory-based phonics approach to reading, writing, and spelling. The phonetic multisensory approach, Fundamental Of Reading Success (FORS), was developed by Arlene Sonday (1991). It is a sequential, systematic phonics approach designed for students with dyslexia or students with reading and spelling problems who have not learned through traditional methods of instruction. The program FORS is based on the premise that one begins with the most common and frequently used sound-symbol relationships and advances to blends, vowels, digraphs, vowel pairs, and diphthongs. The general spelling rules and patterns are introduced and taught. Eventually, the students are taught syllable types and division as well as prefixes and suffixes. The program is taught utilizing repetition, drill, and multisensory techniques. The student simultaneously employs visual, auditory, and kinesthetic-tactile modalities throughout the lesson. The student is taught the tools/rules and generalizations with which to decipher unknown words. The student is asked eliciting questions throughout the lesson to further ensure the accuracy of the rule or generalization as well as to evoke self-correction.

The three participants who received the remediation were randomly selected from the five. The remediation was
conducted on a one-to-one basis. It was based on the individual needs of the participants as determined by the results of the screening instruments and their performances in the tutoring sessions.

The FORS program was selected based upon my experience and training in the FORS program. I had previously completed four graduate credit courses in FORS, each of which consisted of a practicum. I also attended supervisory training in the FORS program.

Reflection

The term reflection is often unclear and holds various meanings to different individuals. According to Schön (1987, p.3), reflection is a "dialogue of thinking and doing through which I become more skillful." According to Kottkamp (1990, p. 199), "Reflection is a powerful means for improving the practice of those who desire to do so." For the purpose of this study, Schön's definition was used; however, it became very apparent that in order for the reflection to reach the action stage it could be done by only those who so desired. Consequently, both Schön's and Kottkamp's definitions were applied to the study.

Schön (1983) differentiates between reflection-on-action (reflection on an event that has already happened) and reflection-in-action (reflection on an event that is presently happening). Schön uses the analogy of a baseball pitcher to further explain reflection-in-action.
The pitcher has to "find the groove" that allows him to consecutively repeat a successful throw. Another analogy he uses is that of jazz musicians improvising together; they continuously reflect on what each musician brings to the group and how they adjust. It is "studying those winning habits" (p.55).

The use of a writing journal for reflection was highly encouraged. A journal was provided for each of the participants as well as a list of guiding statements for reflection (Appendix H) and procedures to follow. The questions and procedures were similar to Barnett and Brill's (as cited in Kottkamp, 1990) "critical incident" journal. The participants were first aided in the process of reflection through the use of probing questions and demonstrations. The modeling consisted of the investigator verbally analyzing and recording a studying experience, including the procedures, outcomes, lessons learned, and recommendations for adjustment. The use of reflection while taking a test was also modeled. The students were encouraged to participate in both reflection-on-action and reflection-in-action. Reflections were conducted throughout the semester of study with all five participants. Reflections could include written, typed, audio recorded, scribed response/journal entries, or e-mail messages. The participants were allowed to decide which method(s) they wished to employ for reflective practices. None of the
students chose to record their reflections through typed, audio recorded, or e-mail. The only method which the students used for reflection was in their journal, which I provided. Their journal entries contained only a brief description of their studying practices. It did not include any analyzing on their part. I had thought the actual writing would be beneficial for the student.

Writing is a process as well as a product. The process involves personal thoughts or conclusions, which can be reviewed and recorded at the individual's pace. The product is all the ideas expressed on paper. Thus, writing is an excellent means for reflection as it is such a powerful tool for learning. Writing is reflective when it consists of rethinking, rereading, and rephrasing.

Writing was a difficult process for these students. They would rather do almost anything else. Reflection was not a common practice for most of these students. They were not accustomed to analyzing their learning process. They also did not enjoy expressing anything in written form; consequently, they preferred oral discussions over written explanations. Because reflection and writing were difficult, they were reluctant for me to view their writings. It became imperative that the students and I have a scheduled weekly meeting to discuss reflections. We devoted 30 minutes of each week to reflection. Providing the opportunity for the students to reflect orally made the process much more enjoyable, manageable,
and beneficial for those who were interested in analyzing and reflecting their thought process.

A constant effort was made to refrain from using prescription and instead use description as explained by Kottkamp (1990). The use of prescription, whether it was negative or positive, was withheld. Instead, the participant was merely encouraged to be specific, supply details, elaborate, and define how and why.

**Observations**

Observations of the participants were conducted during the screening, tutoring, reflection, remediation, and interviewing while in the center. According to Patton (1990), my role was more of a full participant-observer due to the fact that I participated in the study sessions with the participants, called out the content information, and helped them draw associations with the information. I was also a full participant-observer when I tutored the participants in the phonics remediation program. When I observed and scribed during their reflective practices, I took the role of participant observer. When I probed for information during the reflection, I was more than just an observer. I was involved in the process. The observations, conducted over a period of fifteen weeks, included multiple observations during the week. I tried to maintain a broad focus and a holistic view of the entire study.
Interviews

Several interviews were conducted using the interview guide approach (Patton, 1990). Refer to interview questions (Appendix I). This was due to the fact that I wanted to cover or clarify particular topics and issues with each participant. There were also times when the student was in the center working on an assignment or studying and informal conversational interviews (Patton, 1990) were conducted.

Other Data Collection Sources

The participants' private evaluations were examined by the investigator. A questionnaire (Appendix J) that probed their educational and family background was filled in and reviewed. A collection of the participants' work was accumulated as well. Input from the other staff member who worked with the participants was also included in the study.

Data Analysis

Thick description (Geertz, 1973) of the interaction between the participants and schooling was documented. The description included interviews, observations, taped responses, and reflective responses of the three participants who received the O-G remediation along with the other support services offered at the Dyslexia Center while the other two participants' interviews, observations, taped responses, and reflective responses
were based solely on the support services offered at the Dyslexia Center.

The thick descriptions of the five participants were reviewed and examined for similarities and differences. Initially, the main focus of the study was to observe five dyslexic college students and explore the effect an Orton-Gillingham phonics program would have on three of the five participants in regard to their learning and self-image. As the qualitative study progressed, the focus shifted to some degree, and the emphasis was placed on attaining a better understanding of the skills and/or individuals that enabled the college students to overcome the obstacles along the treacherous academic thoroughfare. Thus, the study became primarily qualitative in nature. As the data were collected and the field notes, interviews, and responses were reviewed, the heart of the study thus emerged.

The study focused on the following five aspects of the participants: (a) the survival devices implemented to attain academic success, (b) the academic responsibilities conducted by the students throughout the semester, (c) the reflective practices used by the students, (d) the effect of the O-G phonics program enhancing their learning and self-esteem, and (e) the implementation of study skills demonstrated and discussed.
Credibility

In regard to rigor, internal validity, or credibility, I controlled for biases and approached the study as objectively as possible. A conscious effort was made to report all evidence accurately and fairly. The employment of persistent observations over an extended period of time, triangulation of data, peer debriefing, and member checking ensured that these case studies were credible.

The study was conducted in the center where I had been employed for the past five years. I consequently felt that I had built trust among the participants. The persistent observations over an extended period of time allowed for the study of emerging themes and discouraged distortions.

Triangulation was employed by collecting the data through a variety of sources to ensure accuracy and enhance credibility. The use of peer debriefing was employed to further ensure credibility. Two doctoral students familiar with qualitative research and engaged in research served as peer debriefers. The field notes, emerging themes, concerns, and questions were discussed. Through the entire study, the debriefers discussed and assisted in defining the themes and method of analysis.

The participants served as member checkers to ensure accuracy of the observations and documented field notes.
As the interviews, journals, and reflections were accumulated, they were typed. Each participant's responses were grouped under appropriate headings. They each reviewed the field notes pertaining to them and read or listened as I read their case studies to eliminate any researcher bias and to provide corrections.

**Transferability**

The participants in the study represent a unique population; therefore, the results are not totally generalizable. The majority of dyslexic children unsuccessful in school, fall by the wayside and do not meet academic success. Instead, regarded as failures, they typically do not pursue college. Those dyslexic students who do meet with academic success and pursue college represent only a portion of the dyslexic population. Consequently, the extent to which one can generalize the findings is only to other dyslexic college students pursuing college. It is then my job to provide an accurate, thick description of the qualitative study in order that the findings could be transferred.

**Dependability**

The extent to which the study was reliable depends on whether a similar process would occur again. It was recommended that extensive documentation be generated and all sources clearly documented. An extensive paper trail was collected and maintained.
Confirmability

Confirmability is the idea of a study being grounded in data. The use of an external auditor to review the extensive, documented paper trail was employed, ensuring that the findings were grounded in data and free of biases. The auditor was also employed to ensure that the study was conducted in an objective manner, a very helpful procedure at the end of the study to provide confirmability. My external auditor was a retired English professor at the local university.

Reliability

The administering of the screening twice was to further ensure reliability. The reliability of the Gallistel-Ellis Test "is very high" (Gallistel & Ellis, 1974, p. 27). The Stanford Diagnostic Reading Test's standard error of measurement for the vocabulary section's raw score for the blue level is 2.1 for Form J and 2.0 for Form K. The Gray Oral Reading Test's (GORT) coefficients of intercorrelation among grade-scores on each of the four forms at each grade level, for all subjects, range from .930 to .982. Therefore, the reliability of each test is highly satisfactory. The standard error of measurement is 4.0 points.

Validity

The Gallistel-Ellis Test is a criterion-referenced test. The Stanford Diagnostic Test (SDRT) compared the SDRT 3 with the SDRT 4, and a sound relationship was
found, thus stating there is a measure of criterion-related validity for the 4th edition. The SDRT 4 compared the intercorrelations of the subtests and correlation between the subtests with the Otis-Lennon School Ability Test, Sixth Edition. The findings "provide evidence for the construct validity of SDRT 4" (Karlsen & Gardner, 1996, p. 24). The Gray Oral Reading Test is constructed to ensure validity of oral reading growth and to identify oral reading difficulties. Content validity was built into the construction of the GORT through systematic and controlled item selection and analysis. The GORT was examined with respect to criterion-related validity. The median reported was .53 and described as "moderate" (Bryant & Wiederholt, 1991, p. 35). The issue of construct validity was addressed as well. Five different basic constructs on the test were tested, and all five areas showed significant correlations.
CHAPTER 4
PHONICS INTERVENTION

Three of the five participants received the O-G (FORS) phonics remediation for fifteen forty-minute sessions during the fall semester. The sessions were conducted individually. Kyle, Debra, and Paula were randomly selected for the tutoring.

Each tutoring session followed the same basic format. The initial phase was the flashing of the card pack, which consisted of a phonogram written on 3 by 5 index cards. The student responded orally with the appropriate sound that the phonogram represented. The cards flashed were familiar to the student. Eliciting questions to check for understanding of rules and generalizations accompanied the cards. The second phase was oral dictation of the sounds. The student repeated the sound dictated and then wrote the symbol(s) that represented that sound. Approximately ten sounds were randomly chosen from the card pack familiar to the student, and different sounds were chosen each session.

The next phase was oral reading of isolated words. The student read a list of phonetic words to reinforce the sounds known. Table writing was suggested for unknown words. This was followed by spelling dictation. The student orally repeated the word dictated and then wrote it on paper. Eliciting questions were asked to further ensure the understanding of spelling rules and
generalizations, and in the event of an error, eliciting questions were asked to assist the student in self-correction. Two additional words containing the same sound missed directly followed an incorrect word. The spelling section also included two or three sentences that consisted of several chosen spelling words. The sentence was dictated, repeated orally by the student to check for clarity, and then written. The student then orally read the list of spelling words and sentences written.

New material was introduced at this time; however, every session did not contain new information. The new material was explained, demonstrated, and practiced several times employing the use of multisensory techniques whenever possible. Additional material was not introduced until the previous material was understood and learned.

The session concluded with the student orally reading an article or story. The article chosen by the student was typically from a popular magazine.

A chart was developed to show the students' knowledge base of phonetic sounds and syllabication. It also depicted performance during the tutoring sessions. Their performance during the tutoring session referred to their ability to perform tasks taught and their attitude toward the remediation program (see Table 4).

**Kyle's Tutoring**

Kyle's tutoring consisted of working with the sounds of h, x, short o, and several sounds in column four on the
<table>
<thead>
<tr>
<th></th>
<th>Kyle</th>
<th>Debra</th>
<th>Paula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous Phonics Instruction In Sounds</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Previous Phonics Instruction In Syllable Types</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Previous Instruction In Syllable Division</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Unknown Sounds On Card Pack</td>
<td>h, x, o</td>
<td>x, y, u, ow, igh, ind</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-ly, oi, -ly, igh, oi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-dge, au, au, -sion,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ui, que</td>
<td>ough, augh,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>eu, mn, que,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>gn, stle,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>gue, sc</td>
<td></td>
</tr>
<tr>
<td>Difficulty With Syllable Types</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Difficulty With Syllable Division</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Difficulty Reading Words In Isolation</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

(table continued)
Cooperative  Yes  Yes  Yes  Complain  No  Yes  No

Presentation of Cards (Appendix K). Kyle then learned the fszl rule and short vowel rules. The fszl rule states that generally at the end of a one-syllable word f, s, z, and l are doubled after a short vowel. The short vowel rules address the question of when to write -tch or -ch, -dge or -ge, and -ck or -k. The rule states that generally at the end of a one-syllable word -tch is written after a short vowel sound and -ch after anything else to represent the /ch/ sound. For the /j/ sound, -dge should be written at the end of a one-syllable word after a short vowel sound and -ge after anything else. For the /k/ sound, -ck is written at the end of a one-syllable word after a short vowel sound and -k after anything else.

Kyle then learned the six syllable types: closed, open, silent e, consonant le, vowel pair, and r control. He grasped these syllables quite quickly and was introduced to syllable division. This, too, was not a difficult concept for Kyle. At the end of the tutoring session, he was working on the doubling rule as well. He readily grasped the concepts and identified the appropriate spelling patterns and pronunciations. Kyle did not appear frustrated at all.

The use of nonsense words was employed in the oral reading of words in isolation and in the spelling section.
of the lesson. In order to make sure that the student was applying the spelling rules and generalizations being taught, it was necessary to use words that the student did not recall from memory.

Initially, Kyle was unfamiliar with the syllable types and division but quickly reached a level of proficiency. He never complained about the tutoring sessions, and he was always very willing and conscientious about learning.

**Kyle's Comments**

Kyle's comments concerning tutoring consisted of:

...tutoring helps reinforce sounds when spelling since I haven't done sounds in such a long time. ...as a college student lots of time I stumble over words when reading and this gives me the sounds. ...tutoring helps my reading. ...it doesn't help with notes, don't have time to stop and sound out. He (teacher) talks so fast I'm just trying to get the information down, but I can see as the rules get ingrained and comes easier than you would sound out.

**Debra's Tutoring**

Debra's tutoring involved learning the initial sounds of x, y, short u, ow, and several sounds in column four of the Presentation of Cards (Appendix K). She also learned the multiple sounds of c, g, and y. Debra was then introduced to the fszl rule and short vowel rules for -tch, -dge, and -ck.

She then proceeded to syllable types. Initially, Debra experienced some difficulty in identifying the sound that accompanied the syllable. She was able to identify the syllable as opened, closed, vowel pair, silent e,
consonant le, and r control, but she had problems correctly pronouncing the syllable. After several weeks she was able to begin syllable division. Debra encountered difficulty with syllable division as well.

During the tutoring sessions Debra could successfully identify the individual sound that was represented by a visual symbol although she did have trouble writing the sounds within words and then reading the whole word. It was necessary to use nonsense words for the oral reading of isolated words and the spelling component of the session to ensure that Debra was relying on her phonics knowledge and not her sight vocabulary. Debra was very cooperative during the tutoring sessions even though she often complained about the difficulty of the card pack and sounding out nonsense words.

**Debra's Comments**

Debra's remarks in response to the tutoring sessions were:

I hate doing this phonics. I can't remember the sounds. The only way I remember is I have to think of words (with the same sounds). It's the only way I can do it.

Yuk! (In response to the card pack)

I hate this sheet! (In response to a syllable sheet)

It's so frustrating. I feel so stupid sounding out words in college.

I do it on my own sometimes when I come to a word I don't know. (As the tutoring progressed.)

You need it (Phonics) because what are you going to do if you can't pronounce a word. How are you going
to remember it? Used phonics with anatomy last night.

It (tutoring) was okay. It wasn't that bad today. (Comment at the very end of the tutoring sessions. It was the first time she did not complain.)

I sounded out some words for anatomy, and when I read my doctor's note (recently involved in an automobile accident and injured her back), I didn't have to ask anyone to read it to me.

I sound out words, but I don't let anybody know I sounded them out.

**Paula's Tutoring**

Paula's tutoring consisted of learning the multiple sounds of y and s and several sounds on column four of the Presentation Card (Appendix K). She was very cooperative during the tutoring sessions.

She also learned the f/s/z/l rule and the short vowel spelling rules of -tch, -dge, and -ck. She could identify the syllable types, successfully divide the words into syllables, apply the rules, identify the correct pronunciation of the syllables, and say the words on the worksheet. She was not as successful when reading words in isolation from a word list or spelling list. She did not apply the rules and generalizations and consequently often had difficulty pronouncing the words. The use of nonsense words was employed with Paula as with the other students. This was to ensure the use of phonetic rules and generalization.

**Paula's Comments**

Paula's comments in regard to the tutoring sessions consisted of:
...without phonics I couldn't read. ...I come across words in college I don't know; sometimes I sound it out. ...Now sometimes I'll look for vowels and divide and sound it out. ... if you don't know how to sound out and have a hard time at it, you need something to fix it.
CHAPTER 5
CASE STUDIES OF DYSLEXIC COLLEGE STUDENTS

The five college students who participated in the study all had a story to tell. They all experienced difficulties in phonological processing which had affected their abilities to read and spell. The degree of severity varied as well as the emotional scars to prove it. Fortunately, they had all learned to compensate for their disability. They also wanted to contribute to the study by helping other students so perhaps others would not have to undergo some of the same traumatic experiences. Todd said, "... anything I can do which will make it easier for someone else." It is through these students' voices that we have a better understanding of how and why they are where they are today: they attained high school graduation and are pursuing their college degrees (see Table 5).

Table 5.1
Comparison of Students

<table>
<thead>
<tr>
<th></th>
<th>Todd</th>
<th>Kyle</th>
<th>Dustin</th>
<th>Debra</th>
<th>Paula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivated</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>(says so)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivated</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>(does it)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Week</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(table continued)
The final categories emerged through the use of Glaser and Strauss's (1967) constant comparative analysis of the data collection. The focus was on the individual participant's strengths, weaknesses, and difficulties. From these attributes emerged the following categories: (a) external forces, (b) internal forces, (c) strategies, (d) obstacles, and (e) reflection.

External forces were defined as those forces outside the participants that contributed to their academic success, such as the people who had supported and encouraged the participants and any tutoring or remediation that had impacted the students. The internal forces were defined as the aspects within the students which provided productive energy to overcome the obstacles, including their goals, motivations, and public relation skills as well as their own desires and drives to succeed. The strategies were defined as the tools employed to be successful students, including the study techniques, preferred learning environments, required
accommodations, and organizational skills used by the student. The obstacles were defined as the hurdles that were dealt with by the students that affected their academic lives, including all of the roadblocks they as students experienced that affected their learning. Reflection was the ability to reflect or analyze their own learning and academic goals, and the ability to make adjustments.

**Todd**

Todd, a twenty-one-year-old sophomore pursuing a bachelor's degree in General Business carried 15 hours this semester and had a 2.87 grade point average. He was of medium build and height, his hair was brownish with auburn highlights, and his eyes were green. Todd was the friendliest, happiest, and most talkative student in the group. He was always very open with his discussions and experiences. Todd was the master of overcoming obstacles. He also had the potential of being a "party animal." Todd stated on numerous occasions, "I could never go to LSU, no way; I'd party way too much and have flunked out by now. I've been going to Joe's (pseudonym of local bar) since tenth grade." Todd experienced a tremendous amount of difficulty in school, but he managed to triumph. He was passing all of his courses in college and was enjoying himself. He attributed his academic accomplishments to "...Mrs. Feenly (pseudonym), a tutor from sixth to tenth grade, believed in me when others didn't," ... "my family
and friends," ..."phonics instruction," ... "my own drive and goals," and ... "the taste of success in tenth grade."

**External Forces**

Initially, the external force that impacted Todd's life was his tutor, Mrs. Feenly.

She believed in me when others didn't, showed me every way possible (to study), never gave up on me,...she wouldn't let me leave till I got it. I remember one day we were studying for a Roman Empire test and I couldn't get it. She went over and over it; we spent hours on it, till I got it. She knew I could do it. She would drill the information over and over till I got it.

Another external force which influenced Todd was his environment. "Grew up around so many successful businessmen. I saw what they had and realized I want the same. The environment, my family and friends influenced me."

Todd's father was also a very influential person in his life.

I wanted my dad's respect. He also had this big ostrich boot, and I didn't want to be kicked by it.

My dad was thrilled when I graduated from high school. He was so proud. I guess because he really didn't know if I was going to (graduate). I remember having this talk with him after ninth grade. He sat down, no more yelling and hollering. He talked about my options and me getting a GED (Graduate Equivalent Diploma) and working in the fields with his crew digging lines for cables and wires. Well, I woke up. I decided I didn't want to be the one digging ditches; I wanted to own the company and run it.

Both of Todd's parents encouraged and supported him. Todd recalled his mother always trying to help make the road a little smoother for him. Todd's parents continue to support him.
I have no pressure from parents to hurry and finish. I couldn't do it (college) if my dad was telling me I had to take 18 hours a semester. He's comfortable with my pace. I started with 12 hours the first 2 years and now take 15 hours because I'm in the classes I like. I'd have quit if he'd been yelling at me take more hours.

An external force which contributed to Todd's academic success was studying with one friend.

It does help that I have this one good friend I met here and is in most of my business classes. We study together.

There were also teachers who supported Todd. "I was lucky because in every school I went to I always had one teacher in my corner. There was always someone who believed, understood, and came to bat for me."

Another external force which aided Todd was phonics tutoring. "Phonics tutoring helped me read words. I was tutored in eleventh grade with a 40 year old man." While Todd was in eleventh grade, he was required to take vocabulary tests. Before the tutoring, Todd had relied on cheating to pass the vocabulary tests, but after the tutoring he was able to read and figure out the words on his own. Todd recognized a definite purpose for the tutoring. He had an immediate need for the program and saw the results.

The final external force in Todd's life was the psychotherapy counseling he received. "All of the counseling didn't help at the time, largely due to my attitude, but now as I look back and apply what they said, it helps."
Internal Forces

Todd had direction; he was very aware of his goals and what needed to be accomplished in order to attain those goals. "I know I need a degree for potential advancements in work force. One day I want to take over the family business."

The initial academic success Todd found in tenth grade increased his self-esteem and confidence.

That year I made all A's and B's. I felt success. I saw that I could do it. I learned to work the system when it wasn't that hard. At The Last Resort School (pseudonym) the curriculum was easier because it was a school for children with special needs. They had kids who were rejects, not stable, mentally slow, but not retarded. I wasn't like them. I behaved. I wasn't a trouble maker; I didn't raise hell. I went to school, did my work. I decided I wanted to do well, and school enabled me to do well. I also didn't have a lot of friends there to show off.

It's important knowing I can do it. Not doubting myself. Having control of learning, the mind set. I want to do it (earn a college degree). I have the discipline, motivation, drive, and commitment. I would look like such a du if I didn't finish, especially if I can do it.

Todd also relied on his own personality and ability to easily converse with others.

It also helps if I can talk with the teacher. You know, go in and BS with them, relate to them. I try to get to know them more on a personal level.

Todd believed in planning for the future and setting goals.

I set realistic goals; I'm not setting myself up for failure. I know where I want to be in 5 years, 10 years. Friends call me for advice all the time. I ask them what do you want to do? Where do you want
to be in 5 years, 10 years? Is that going to get you there?

We talked about happiness and how happiness comes from within. Todd stated, "It's important that you're happy." He also defined happiness as, "... It's your outlook, how you perceive things. I'm optimistic; it always works out."

Todd felt responsible for his own learning. "I help myself the most (in college). I'm 21; it's time."

**Strategies**

The strategies demonstrated by Mrs. Feenly from sixth through tenth grade became the tools that Todd used to attack learning. He altered the strategies and made them fit his needs. He also picked up additional techniques while at The Last Resort School. Then when he transferred to The Christian Prep High School (pseudonym), he applied the techniques. When he started college, he applied those strategies that he found beneficial and altered them to fit his needs.

Todd stated, "The tutor showed me every way to study. At first she started making study guides, and later I made them, and now I still make them. No one said, 'Oh, do this and it will work.' I took bits and pieces from many and made my own way."

In college, Todd reread his notes and retyped his notes into a study guide on his personal computer. He then highlighted the important information and reviewed it several times. He put definitions and terms for geology
on note cards. He copied diagrams and charts when necessary. In literature classes he listened to the books on tape (from the State Library of Louisiana).

Todd was aware of how he learns best.

The way I learn best is to construct a study guide. I make a study guide from my notes. I type out the information. I read over it about four times before I have it like I want. I'm learning it as I read it. Then I'll underline with a pen to emphasize words. Then I highlight the words in one color and highlight the definitions in another color. I visualize and memorize the study guide. I know the order that it's in. I memorize the order easily. When I'm taking a test and don't know it, I see (visualize) it on the study guide. For some classes the tests come from the text also. So, now I make a study guide for the text. The study guide really works. I learn so much when I make out the study guide.

Todd often studies for his business classes with a friend.

For my business classes I have a friend that I study with. After I've made the study guide and are familiar with it he'll come over. I teach it to him. It helps me to teach it to him. He comes over and doesn't know anything, so I teach him. For accounting we'll work together on problems, just the two of us. Three people is too many. Everyone had different questions, never get anything done.

Another strategy which Todd utilized was predicting test questions. "I can also predict pretty much what's going to be on a test. I have a good idea, especially after taking a test with them" (instructors).

Todd was attentive in class and found learning much easier if he could relate to the material and/or instructor. Todd stated, "...It helps if the teacher makes it (information) relate to the real world or personally relate."
The accommodations Todd relied on were using the computer and spell check for essays. He listened to novels on tape, and occasionally required extended time for tests.

Todd usually studied two to three days before an average test and four days before a major test. An average test was considered a "regular" test throughout the semester. A major test was an "important" test or final, a test Todd wanted to do really well on. Usually he put a total of twelve hours into an average test; more time was devoted to an "important" test.

Todd studied in his apartment "...in the evenings, at night, and late at night." He usually studied for two to two and one-half hours at a time during the week. Todd did not study on Saturday and studied only on Sunday if he had a test on Monday. "I don't get burned out because I don't study everyday. If I studied everyday, I probably would (get burned out). The weekends are a huge breather for me. I know how long it'll (outline and study) take and plan for it. I plan around weekends."

He also worked better under pressure. "I get a game face on it's such a mind set, but I work better under pressure. I've had times where I could start (studying) a week or two before (a test), but I don't. I've even
waited till 2 days before and still put the twelve hours in."

Todd was attentive in class.

I attend class almost every day and listen. I don't always sit in front, and don't usually ask questions, I look it up. I participate in (class) discussions if knowledgeable and interested (in the subject), like business law.

Another important aspect of Todd's learning was that he was not surrounded by good friends encouraging him "...to go and have a good time." According to Todd, "The smartest thing was me coming here. I knew I couldn't go to LSU; I didn't even apply. No way I could stay in Baton Rouge."

The type of college course(s) Todd was enrolled in was a factor as well. For the first two years Todd took twelve hours per semester. Now that he was a sophomore and interested in the courses and saw a purpose, he increased his course load to fifteen hours a semester.

Obstacles

A major dilemma for Todd when he was younger was staying in a school. He experienced a tremendous amount of difficulty as a young student. Upon the onset of school, Todd had problems learning to read and write. Unfortunately, because his learning disability was so severe, he became a behavior problem as well. Due to his inappropriate behavior and low grades, he transferred schools 11 times between the first and twelfth grades, sometimes returning to a school previously attended. Todd
repeated first grade, and by the end of second grade was in his fourth school due to poor academics and behavior. He finished second, third, and fourth grade at a non-college preparatory school. At that time he was not a behavior problem and earned C's.

His parents switched him to an exclusive private college preparatory school the next year. Somehow he managed to just get by in fifth grade, but sixth grade was horrible. "I failed every class, but my parents talked with the school and they agreed to give me all D's if I'd go to another school." Todd attended a public middle school for seventh grade. He recollected, "I did all right."

His parents managed to get him back into the exclusive private college preparatory school to begin eighth grade. It was a short stay. His behavior and grades would not permit him to finish the year. Todd also noted, "I had many friends there." He was then transferred back to the same public middle school that he had attended in seventh grade. He earned "...B's, C's, and maybe an A."

He tried a private Catholic preparatory school for ninth grade. He failed two and one-half classes. "One was religion, one was science, and half of something else." He also noted that he had many friends in attendance.
It was at this point that Todd had the heart-to-heart conversation with his dad and "woke up". He attended summer school at another "special school" to make up for the subjects he had failed in ninth grade. He then attended tenth grade at this same school. Here he applied the skills and learning strategies his tutor had been demonstrating and met with success; just as important, he was no longer a behavior problem.

After tenth grade and some academic success, he transferred to another private Christian preparatory school. He recalls,

I made B's and C's and it was a college preparatory school. I didn't fail anything. I went to this school for my junior and senior years. It was a college preparatory high school; the curriculum was harder, but I applied the same skills I had used in tenth grade when it was easier. I knew I could pass. I didn't have a lot of friends there. I didn't have to show off. I went to class and kept my mouth shut. I also found out which teachers I was going to get along with.

Another obstacle that distracted Todd and inhibited his ability to perform well academically was having too many friends around.

I later learned in high school it was better if I didn't have friends around to show off in front of. I knew if I was going to make it in college I couldn't go to LSU with all of my friends. I'd of flunked out by now with all the partying. No way!

Those teachers who did not support and understand him were an obstacle as well. Todd recalled that the teachers' attitude toward him was a determining factor in his class performance. In fact, at the end of fifth grade the students were allowed to go and meet their prospective
sixth grade teacher. Todd remembered, "... walking into the sixth grade classroom and the teacher saying, 'Oh, you're that problem child from fifth grade,' and I was."

In defining a specific obstacle, Todd disliked reading, especially literature. He felt it was often pointless and had no real value to him.

I read fishing magazines from cover to cover. I buy a newspaper three times a week and read it, but I never read a novel. I can read words quickly, but comprehending is another thing. If I'm interested in it, average, pretty good comprehension.

Todd also felt his handwriting is atrocious and preferred to type everything or just verbalize it.

Because Todd had often felt "lost throughout school," he was forced to figure out how to understand the material on his own. Todd attributed this skill as to why he had done well in some college classes that he had been advised not to take.

I've been discouraged to take certain classes with particular instructors because they were supposed to be too hard, or their test came from unknown, or something, and I do fine. I figure out a way.

Reflection

Reflection was not a new process for Todd. He was very familiar with setting goals, devising plans to meet those goals, evaluating the progress, and adjusting when necessary. He also reflected on his learning strategies.

I internalize so much. I keep a mental journal. I'm also big on setting goals. Reflection is therapy for me. It explains so much to me. I understand now why I had such a bad attitude and was a punk of the class. A lot of people don't think about long term
goals; students in general don't. Dyslexics are even worst, and they need to set goals even more.

I always made a study guide from my notes for a test, but it was like a light bulb went off when I decided to make a study guide from the text for econ (economics). Econ test worded like text, so much comes from the text on the tests. Before, I had never really thought about the tests after I took them, only if I succeeded or flunked. Now I go back and think what could I do differently, and not just because it sounds good, but because it will help.

Kyle

Kyle was a twenty-one-year-old sophomore pursuing a bachelor's degree in mathematics. He carried 12 hours a semester and maintained a 2.4 grade point average. Kyle was of medium height and relatively thin, and had golden brown straight hair, brown eyes, and tanned skin. He appeared subdued even though he was always pleasant and entered the sessions ready to work. The "shy, quiet type," Kyle was very reserved, usually not participating in the usual college scene. He was not interested in partying or going out to bars. He attributed his academic accomplishments to "... a very influential math tutor from seventh through tenth grade, ... my mom and family's support, ... success in math in tenth and eleventh grade, ... my own motivation."

External Forces

The external force that had the greatest positive effect on Kyle was a math tutor. She helped him develop his self-confidence as well as his math skills. Another influential person was Kyle's mother. In fact, his whole family was very supportive and encouraging. Kyle also
attended several different study skill sessions when he was younger, and he recalled the sessions.

She tutored me from seventh through tenth grade. She is the one who tutored me in algebra. She explained everything to me, taught me how to study. She believed in me. She explained it; we went over it again and again, till I understood it.

My mom was also very influential. She made me do the work (school) and go to tutors. I always had tutors as long as I can remember. The time spent has paid off. She (mother) told me one day you'll thank me for this, just go. We (mother and Kyle) used to bitch about it (tutoring) all the time. Had yelling matches.

My family has always supported and encouraged me. They (parents) both have advanced degrees and value education. I also know I don't want to do manual labor, so I have an incentive to do well and get a degree.

Without the examples shown by the tutor and all the study skill sessions, school would be much more stressful and harder, and I'd have to put in so much more work.

In college, the people who assisted Kyle were the people in the study group and various teachers. Kyle found studying math with a small group of classmates very beneficial. There was also one particular student who had been in several of Kyle's math courses, and he felt comfortable asking her for help. Also, his history teacher was willing to meet anytime and discuss issues with him.

**Internal Forces**

Motivation and enjoyment of learning were the primary internal forces that drove Kyle academically.

I'm motivated to finish. The success in my sophomore algebra class and in my junior year (of high school) made a big difference. It gave me the confidence. I
accept my work now when I put forth my best effort and ability. While in Montana (at a drug rehabilitation program) they recommended I continue treatment as an outpatient in southern Louisiana. I was sixteen years old and still in high school. I came here motivated to do well. I knew what I needed to do; it had been drilled into me for so long. I had a taste of success in the algebra class.

Compared to Kyle's earlier learning experience, his attitude toward school and learning had changed dramatically.

I enjoy learning; learning is fun now. Earlier in my life learning was not fun. There were yelling matches in my house. I enjoy college and learning. I enjoy some subjects more; math is one subject in particular I'm fascinated in learning. Math is easy for me because I understand now.

Kyle felt good about himself and believed he had control of his learning.

I now help myself the most with college work. I study. I work hard. I set goals. They help. I make short term goals each semester and accomplish them. I keep at it and don't give up. I'm happy with where I am in life.

**Strategies**

Kyle has learned that there is not one strategy or technique that will "fix" a learning disability. Kyle learned to compensate for his learning disability; "before I wouldn't bother. Learning was such a struggle, too frustrating, easier to quit."

The algebra tutor in high school explained it over and over again until I understood it. She explained everything to me, taught me how to study. I learned I could figure a way, go home, and work problems again and again until I understand the process.

In college,

...for history I take notes. I also have copies of two other people's notes. I compare the notes.
In math I read over the notes once. I work problems, flip back and forth in notes to work problems, keep working problems till I don't need to flip in notebook. Once I understand it, go back and work more problems. What really helps is when we study in small groups. We argue for the point we believe the answer, and to argue the point you have to explain it; to explain it to others you really have to understand it.

Kyle read the history information and compared the three sets of notes, which were very similar. After he read a section of the information, he summarized it.

Kyle often studied history in the center with me. We began the study session by discussing the events, battles, and persons with the aid of his notes. Then Kyle rephrased the information in his own words. We continued this for about a page or two and would then review. The review consisted of me stating an event, battle, person, and Kyle then explaining the information. Right before a test we reviewed copies of old tests (100 multiple choice questions). Kyle often responded with the answer before hearing the choices. Kyle used invented spelling and generally was phonetically accurate. Most of the time I was able to decipher his written words. If I could not identify a word, he could. Several examples of his invented spelling for history included Ugeen for Eugene, Monro Doctron for Monroe Doctrine, setal for settle, and tresury for treasury.

Kyle was responsible for being familiar with current events on the history tests as well. Initially, he relied on the internet and occasionally a newspaper. He later
decided to subscribe to a daily newspaper. Kyle also chose to write flash cards for the tariffs and bills that he had difficulty remembering.

In English classes it was necessary that Kyle be allowed to use the computer for his spelling difficulties. He also needed extended time to complete essays. Kyle found rewriting notes too time consuming. "By the time I rewrote them, I could have made short notes on cards and already started learning the information." The accommodations Kyle requested were the use of the computer and spell check for papers and occasionally extended time on tests.

Along with college came a great deal of free time and responsibility for the students. For some students this was a hindrance, while others found it an asset. Kyle enjoyed the freedom.

I like setting my own time, being able to come and go, not seven or eight hours in classes everyday.

The amount of time I spend on studying makes the difference. I study twice a day, early afternoon after classes and then right after dinner, about 6:00. I can't wait and study too late. And more studying if I have a test. I usually start studying for a test a week in advance and study everyday. On Friday and Saturday I'll take a break. Sunday study if a test. If I have to, I'll study and do work on weekend.

Kyle was extremely dedicated to his school work. He had priorities and school was first. He was also very disciplined. In fact, Kyle did not go to Houston for the Thanksgiving break to be with relatives in order to prepare for a final exam the following Monday.
Typically Kyle studied in the library for two-hour periods. If he got really frustrated, he would get up and get a drink of water. The small group he studied with for math met in the library.

I like studying for math in a small group of four or five. Each math class makes up their own group. One student is in two of my math classes and so in both groups. A group is good because often at least one of us understands, or if none of us does, four problem solvers are better than one. We meet in the library often in a small room with a chalkboard. We all work on the same problem individually, and sometimes one or two will get together and work the problems cooperatively if they're really stuck. Once someone thinks they have the answer or close to it, they put it up (on the chalkboard), and then we all talk and discuss it. If we're still stuck and unsure, we each put up what we know and talk about it. We can usually figure it out. If not, we go home and work on the missing parts. We meet together again at a later date and usually solve it.

Kyle was attentive and attended class everyday. He sat in the front of class if he was in a large auditorium; otherwise, in smaller classes it did not matter where he sat. The only classes in which Kyle felt comfortable enough to ask questions were math classes.

I'll ask questions in math because if I don't understand others must not either. In other classes I'll ask one-on-one right after class or in their office later that day.

Obstacles

Earlier in Kyle's life he felt,

... school was so frustrating, such a struggle. I repeated second grade. I really remember not wanting to go in third grade. Remember noticing a difference between myself and other students. Remember noticing like when we had a spelling contest in elementary school. I always dreaded them. Hated when I was called on to read. Hated anything that had to do with me performing in front of other students. It's gotten better, but still even now I don't like to get
up in front of the class. It's gotten better just with the amount of time spent going over exercises or whatever I'm going to have to present.

In seventh grade I used dyslexia as a crutch; it was easy to bring home C's and D's, and the family would say, 'Oh you're trying.' I didn't put forth the effort. Continued in ninth and tenth grade. I had a real bad attitude. I didn't care. My grades didn't matter. The only thing I did well in was algebra in tenth grade, and that was because of my tutor. I got into drugs and drinking real heavily. I'd started in eighth grade (using drugs). It was my brother and his friends that introduced me to drugs.

Summer after tenth grade my parents shipped me off to a treatment center in Montana. They just told me one evening we know you use drugs, your brother told us and you are going for treatment tomorrow. My brother was away at college and had called home for help. Once he got help, he told them (parents) I needed help too. At first I couldn't understand why he thought he needed help. Why did he want to stop? He helped me to realize and see what they (drugs) were doing to me.

After the summer I could go back home to the west coast as an outpatient. I decided no I'd end up back in old high school with old friends doing the same old stuff. No one knew what happened to me. One day I was there hanging out, and the next day I was gone and never came back.

I go home for Christmas and part of the summer. Most of my old friends are still doing the same old stuff. I'm so glad I moved on.

The only obstacle Kyle experienced in college was "...difficulty with English." He attributed it to "...lack of understanding I have for the English language and poor spelling." When Kyle was enrolled in English classes, he was forced to rely on several accommodations. He used the computer, the spell checker, and extended time for writing essays.
Reflection

Reflection on action was not foreign to Kyle.

...typically I reflect on school and goals. I set goals mentally and reflect on what I've done and haven't done. I reflect on the goals that I've set. Reflection helps, shows me what I need to change and keep the same.

I'm a pretty good student. I study and do what's required of me.

I cleared my head in Montana and grew up. I was sixteen years old when I came to Louisiana by myself.

Kyle was also aware of the role his mother and tutor played in his academic accomplishments. "My mom made me do the work and go to tutors. The time spent has paid off. I told her what a difference it's made." Kyle was fortunate his mother had cared enough and had not given up on him. He realized it would have been easier for his mother to let him do as he wished, but she did not. He was very glad and thankful she had not given up on him.

In regard to reflection on tests,

I usually don't think much about tests once I've taken them, unless the course is comprehensive. In history I'm less inclined to go and look, though it would help. (The grades are just posted.) Figure I just got confused on all the people.

Kyle later decided to meet with his history teacher to determine why he had made a C on a history test. Initially, he thought he had confused the names of the people. He later found out he had missed two of the four current events; therefore, he decided to subscribe to a daily newspaper.
Dustin

Dustin was a twenty-year-old sophomore pursuing a bachelor's degree in Culinary Arts. He had a 2.4 grade point average and carried 12 hours of course work a semester. He was tall and thin and had black wavy hair and dark eyes. Dustin generally came to the meetings dressed in his chef's attire, white jacket and black-and-white checkered pants. He was the "yes man." He knew what the other person wanted to hear. He knew what to say and do though he did not always follow through. When asked what he should do to improve his learning and grades, he quickly responded with appropriate answers. He knew what could work but did not always follow through with his own recommendations. He was very talkative and quickly answered all of the questions. He also allowed me to view only a glimpse of himself. He seemed to hold back information and did not want to reveal everything about himself. He simply did not elaborate on details even when probed. We discussed several study skill techniques he could use to improve his current grades. He noted the merit although he never actually applied them to his course work. He attributed his academic success to "...learning from past mistakes, ... own motivation, and ...assistance from Dyslexia Center."

External Forces

The most influential person in Dustin's life was his mom. "She always supported and encouraged me. When I was
younger, I was shy and needed someone to motivate me."
Another influential person was a private tutor. "I had a
tutor who came to my house in first and second grades.
She helped me learn." Dustin also received a substantial
amount of assistance from resource classes while in the
elementary grades. He went to resource for a variety of
subjects in the lower grades. In high school he managed
to attend resource only for English.

From fourth through sixth grade I was in resource.
We did a lot of baby work with sounds and letters; we
also did a lot in math. We did lots of worksheets.
It was all drill and practice. In sixth grade I
managed to get out of resource for everything but
English.

Now in college, Dustin stated,

My academic assistant in the center has helped me the
most with college work, especially English. I
couldn't of done it without him. My weakest subject
is English and without my assistant, computer, and
spell check I wouldn't of gotten as far. I need the
most help in English.

Dustin was aware of the type of teacher he learned
best with.

I like a teacher, one that helps me out, not boring,
knows how to teach, not majored only in certain
subject, but a teacher. It helps if they make it
interesting and something I can relate to. If they
are involved with the class, talk and have fun with
the class, not boring, help out.

Dustin also felt, "A friend in the class helps.
Always someone there if I miss something."

Internal Forces

The internal forces which stimulated Dustin to
continue academically were his goals and dreams. He never
doubted that he would finish high school and attend
college. Dustin also desired to do well academically so that he might do well financially.

I have goals and dreams. I know what I want to be, and that motivates me. Now my idea is to try and get as high as I can without stepping on someone else. I am ambitious but don't need to be that ambitious.

I want a degree so I can get a good job. I want to manage a hotel restaurant. I don't want to actually cook. It's too much work. I just want to sit and see the money roll in while everyone else does the dirty work.

**Strategies**

Dustin was aware of what he needed to do to learn.

He was also aware of the strategies which aided him.

I read over the stuff. If things to highlight, main, important things I highlight. I know how to study. I can locate the main idea.

I reread my notes, but don't rewrite or retyp[e them. That's too time consuming. I don't usually put information on note cards, but in chemistry I put the information on note cards.

I know I need to prioritize and organize. This week:
First - Culinary has three big things I need to pass.
Second - English narrative paper I need to work on two days.
Third - Fraternity I've gotten a lot back from it. I could get a job internationally.
Fourth - History, it's not that important this week.
Fifth - Apartment, clean up. I used to be a neat person before college.
Next week priorities:
First - English
Second - Culinary- lecture due and a field trip
Third - Fraternity
Fourth - History
Fifth - Apartment

The study skills, organizational calendar, and planner are helpful. I need to stick with it.

For English I need to read the novels slowly, pay attention, and put important things on cards. I should highlight in the book and make an outline. For papers I really need the computer and spell
check, and when the paper is read to me, I catch 80% of my mistakes.

For history I need to read the notes every night. I need to list the people, places, or events and highlight. I need to really study and worry about prioritizing. I really have to make out a plan and stick to it.

I try the hardest in Culinary Arts; I'm not happy with a C. For written tests you just have to pay attention in class and read it once. You basically learn it in class and then just glance over it; most of it's common sense. For the skills tests, you have to prepare something. It's nothing, really.

The project I'm working on now is three vegetarian dishes. Wednesday I have to do the menu pricing. Thursday I have to do a fifteen-minute presentation, and Friday I have to prepare or make the dishes.

Generally, the accommodations Dustin relied on were a copy of notes, use of a computer with spell check for papers, and extended time for tests. As a freshman in college, Dustin chose to study in the library; however, this semester he preferred to study at the kitchen table in his apartment.

First semester (at college) I lived in the library and did real well. The second semester I went (to the library) when the fraternity said to. In the summer I went for accounting because the answer booklet was in there (library). This semester I went three times. Once I went and saw a friend and started talking with her. The second time was to print out information, and the third time was to help someone else print out information.

I study every now and then, (pause) whenever a test and I remember. Best time to do homework is on the weekend.

I study at the kitchen table in the apartment. I study for one to three or four hours. I get up and walk back and forth, I'm right next to the kitchen, and get something to eat.
... no girls around, nothing to distract me, no telephone; that's a major distraction; a lot of times a radio helps.

I sit down with books and stuff and read over it. In history sometimes I studied with a small group.

We traded information that we knew, helped pretty much. I also usually read my notes and compared with copy of notes.

For English papers I go in the center, brainstorm with Randy, sometimes make an outline, start typing, have it read orally, and fix mistakes. I learn from my mistakes on English papers. I don't repeat the same mistake. A lot of this I never had before cause I was in resource and never knew.

For novels I read the books at night in my bedroom. I highlight the important parts.

I go to all of my classes. I ask questions and participate.

Dustin is also aware of his preferred learning environment for his classes. "I like it when the class is not jumping around too much, and not just sitting (pause) mixed." As previously stated, Dustin benefits when the teacher "helps and makes it interesting."

Obstacles

Dustin did not have a traumatic beginning with school. He felt, "School was never that difficult." Though he was placed in resource in the elementary grades, he managed to talk his way out of resource in sixth grade except for English. Dustin recalled the difficulties he experienced while in college and felt his primary obstacle was motivating himself to study and learn.

I know I can pass all the classes. I know I can do the work. I just can't get motivated. I need something really hard to motivate me to get things
done. Maybe I need to take more classes. It's hard to motivate me, just takes some time.

Last summer accounting was difficult, too much information, too fast, too much to learn too fast.

In history, I had trouble with the listings. I had everything memorized; I got in there and forgot it. It was a lot to learn and difficult for everyone. Note cards didn't work for me. I really don't care for them. I guess some people can do it and some can't. English is my weakest subject. I need the most help in English. I was always in resource, so I never did a lot of this stuff.

Dustin was also aware of the type of tests he did not perform well on. "I don't like, don't do well with fill in the blank test."

Reflection

As Dustin reflected on schooling and college, he became aware of the various strategies he should have implemented. He also reflected on what he should do next semester.

I guess I could study a lot more than I do. I have to follow my schedule.

For motivation, I might need to take more classes. It's hard to motivate me.

For English I should divide the book into small sections, not to overwhelm me. I need to read the novels slow and highlight important parts. I need to come back into the center more.

I should rewrite my history notes. I should list the people, places, and events, and highlight. Don't know about note cards, too lazy.

I need to actually study and not just say study. I need to do more. I need to put my mind on one thing, study, and stick with a plan.

I know what it takes to make a grade. I can do it if I put my mind on that and take extra stuff out.
Reflection helps. In comparing semesters, I really didn't do anything this semester. I sat around and let the semester go by. Last fall I put my mind to it and got the job done. In the spring it was easy going to the library, and I got the job done. In the summer I could have done better. Too hard of courses. That accounting almost killed me. That's what probably got me to this point. I should of taken a break in the summer. If I come again in the summer, I'll only take two courses to be full-time so the state will pay. I don't know if I'll go again in the summer. No!

The calendar and organization did work when I did it, need to get back to it.

Next semester I plan on getting a job, won't have all the extra time to goof off. So much free time, could put things off. With a job I won't think like that; I'll go over the study skills suggestions. Really going to have to make out a plan.

Debra

Debra was a twenty-year-old sophomore pursuing a Pre-Occupational Therapy program. Debra maintained twelve hours a semester and earned a 2.4 grade point average. Debra was a friendly, kind, energetic, young lady. Her short brown hair had either auburn or golden highlights. She was tall, thin, and always dressed in the latest fashion. She usually entered the sessions ready to study and work. She was "Miss Congeniality," relying on her friendly, kind personality and attractive looks to accomplish tasks. She attributed her academic success to "...my mom always supported me, ...my advisor in Dyslexia Center showed me I can do it,...high school resource teachers pushed me, and ...own desire and motivation."
External Forces

There were several external forces that were most influential in Debra's academic success.

My mom influenced me a lot. She is always supportive and got me the help I needed. In high school the resource teachers stayed on me and pushed me. My advisor in the Dyslexia Center showed me I can do it. She studies the most with me.

All of the counseling I received for my self-esteem helped. Because second grade was so horrible, my self-esteem was shot. The counseling helped me survive, to get me where I am today.

All of the tutoring both in content subjects and phonics helped. What are you going to do if you can't pronounce a word? All of the multisensory techniques help me. When I read it out loud, see it, say it, hear it, write it, helps.

Internal Forces

Debra had a very strong desire to prove to everyone that she was capable of earning a college degree.

It's through my own motivation, desire, and strength to succeed that I've come so far. I want a degree. I want to prove and show everybody I can do it. I strive to do good, strive to do the best. I want to prove to people I can do it and to better myself.

I set goals for myself. I want a 3.0 cumulative GPA (grade point average) to get into occupational (therapy) school. I want to be successful at whatever I do. I want to be more independent, wish I could be on my own. I want to be successful in life in whatever road I take. I'm motivated to do well.

Another strategy that Debra employed was her people skills. She was very friendly and outgoing, and had become accustomed to smooth talking her way in and out of things. For registration the system was down and she was leaving to visit her boyfriend out of state. She called and talked a person in the registrar's office into
registering for her. (The registration process used by this university still required the person to physically go through lines and turn in a bubbled sheet with the class choices.) She used the same manipulative behavior with the professors when she wanted to change the scheduled date or time of an exam to meet her needs.

Strategies

Debra employed various studying strategies throughout the semester.

I always try and get a copy of someone else's notes.

I get my books on tape (Recording for the Blind and Dyslexic). I tape record some classes, listen, and write the notes. It's so time consuming though.

I also make flash cards, especially for anatomy and physiology. I write with colored markers instead of pens (on the flash cards). I write the word and definition in the same color. I write two in purple, then two in green, then two in orange, and two in red and start over.

The note cards work best if I'm having difficulty learning information. I memorize the information and self-test myself. I also use all of my senses, reading, writing, and listening. I read it out loud, make sense of it and put it in my own words, then if I need to, write it on flash cards.

Debra purchased a copy of the teacher's notes for anatomy and physiology at a local copy store. As Debra read over the notes orally, she highlighted key points or words that would trigger her memory.

Debra often studied for anatomy and physiology with me in the center. I read the notes aloud, a paragraph or several sentences at a time. Often a discussion followed, accompanied by illustrations, diagrams, and/or
clarification from the textbook. Once an understanding was reached, Debra rephrased the information. When necessary, note cards were made for material she found difficult to learn. As new information was learned, the old information was continually reviewed. If Debra was required to diagram on a test, "I copy it, label it, color code it, and study it."

For speech class, I read the notes to Debra in sections, which were divided into steps, classifications, definitions, and types. Debra repeated the information. It was then discussed and reviewed again. For long listings, I read the information aloud, we would both repeat it simultaneously and discuss it, and then Debra would say it. The material was reviewed several times. For assigned oral presentations, Debra often telephoned or came by the office to discuss possible topics and points to include in the speech.

Typically, Debra studied with me although she planned to read over her notes twice a week. She often waited to study at our scheduled time. If it was time for a test, she focused on that particular subject 24 hours before the test. Debra's study habits when she was cramming the night before an exam included:

...studying in the afternoon with you (researcher), by myself at night after work in my bedroom or in the study. I usually study for one to two hours straight and then take a break. After a short break, I'll start up again.
Debra's classroom habits included sitting in the front of the class, attending class 95% of the time, participating in class discussions, and asking questions after class. The accommodations that Debra required were extended time, reader for tests, copy of notes, tape record lectures, books on tape, and use of the computer and spell check for essays and papers.

Obstacles

School was difficult and unpleasant upon onset. According to Debra,

Second grade was the worst year of my entire life. My teacher was horrible, and the school was horrible. The teacher tied me down with my own jump rope in my desk, turned out the lights, and left with the other students for recess or an assembly. We were in portable buildings, and I was screaming for help. I screamed for 15 minutes before the cleaning lady came and untied me. It (period in which she got tied up) was during math class, and of course my desk was next to the teacher's. I got up for a Kleenex because I had a cold. She had told me not to get up, so she tied me up. The worst thing was when I got home and told my mother she didn't believe me. She (mom) asked one of my friends who told her it was true. She (mom) then went to school and asked the cleaning lady. She (cleaning lady) said it was true.

The teacher said I was lazy, wouldn't do my work, and a behavior problem. She screwed me up.

The principal would paddle me in his office for every page I didn't do. I would yell, holler, scream, and kick. I would kick so much he would lift me up on his shoulder and hold my legs tight against his chest and paddle me. One day my mom was there in the office. I was screaming and hollering. I reached up and grabbed the top of the door frame. My mom came in and told the principal to put me down and that he could not lay another hand on me.

I remember when it was Easter time all of the other kids got to dye eggs, but I couldn't because I hadn't finished a page. I had to sit in my desk and do that page.
She (teacher) screwed me up. Everyday I wanted to kill myself. If I saw that teacher today I don't know what I'd do. I'd want to kill her.

The next year we moved, and I went to a different school. That was in Mississippi.

Another obstacle for Debra was not understanding the disability. It was a relief to Debra to find she wasn't the only one and that other people had a similar disability.

No one explained it to me, what dyslexia was. Thought I was the only one stupid. I didn't know anyone else had it. It was great to find out other people had it, even famous people.

A major obstacle Debra faced in college was English. Debra continued to find English and spelling a challenge.

English and spelling are still so difficult for me. I hate phonics. I can't remember the sounds, it's so frustrating. I feel so stupid having to sound out words in college. I also have trouble with history because there's so much stuff, dates, and teacher just lectures and nothing's done to make it easier.

Reflection

Debra's response to reflection was,

Reflection helps me see what I'm really doing. When I reflect, I think about what I should be doing.

In high school, in resource we kept a journal. Now I only write in it when I'm really mad, to express my feelings and vent it all out.

This semester I'm not self-disciplined. I'm not doing the time management I need to. I think I need to take the TV out of my room. I realize I'm not putting forth the effort, so I'm not achieving what I could. I could have a 3.0.

I know how I learn best, but I've just been procrastinating. I need to get busy. I need to stay on top of things, stay organized, stick to my schedule. I need to start studying earlier, write
flash cards, and use all my senses, like sight, listening, writing, touching, you know, multisensory.

I know what I need to do to study and get the work done, though sometimes I procrastinate. I just have to do it, make myself do it. I'm the number one procrastinator.

Paula

Paula was a nineteen-year-old first-semester freshman considering pursuing an elementary education degree. As a first-time freshman, she was enrolled for twelve semester hours. Paula had long, dark brown, curly hair with dark brown eyes. Her hair was usually tied up in a knot on the top of her head or pulled back in a pony tail. She was of medium height and build. She usually wore a T-shirt and jeans or shorts, and she never wore make-up.

Paula was not a morning person, and one of her scheduled meeting was on Wednesdays at 8:30. She usually walked in dragging and very reluctant to work on content matter for her courses. She preferred that I read her novels orally at this time or interviewed her, or she discussed her study habits. Paula frequented the center mostly mid-morning and in the afternoon. In fact, I saw Paula at least once a day. She often just stopped by to check in and say hi, or she was busy working on essays in the computer room. We also met on Thursday afternoons at 1:30. Though she was often in a happier, more jovial mood in the afternoon, she was still often reluctant to study. We joked about the fact that she did not enjoy mornings and what a different person she was in the afternoons.
Paula was a typical freshmen who would rather spend her time doing anything else than school work. She participated in and enjoyed all of the intramural sports. She spent her weekends participating in sport activities and getting together with friends at various universities across the southern part of the state. Paula attributed her academic success to "...personal motivation, parental support, phonics tutoring, and teacher's support."

**External Forces**

There were several external forces that assisted Paula throughout her schooling. They included a specific caring teacher, her family, and an O-G tutoring program. There was one particular teacher who was very influential in Paula's life. "A lot of people have influenced my life, especially Mrs. Dee (pseudonym). She was my resource teacher from 8th to 12th grade, and my third and sixth grade teacher." Paula's family supported and encouraged her throughout her life. Another positive factor was that her mom taught in the same small school that Paula attended, so most of the teachers were willing to work with Paula. The Saturday and summer phonics tutoring that Paula attended was also very beneficial to her academic success. According to Paula, "Without phonics, I couldn't read."

**Internal Forces**

Paula's own motivation and desire to earn a college degree were the two internal forces that helped to drive
her academically. She was sure she wanted a professional career and felt college was a necessary step to fulfill this goal.

I want a college degree, though I'm not sure what that is yet. I'll probably become a teacher. I want it to be something I like. I think I'd like teaching. Right now I'm in General Studies because I'm just taking the beginning courses and it doesn't really matter. My goal's to finish college. I'm self-motivated because I wanta prove to everyone else I wasn't stupid.

Strategies

Paula first recalled the strategies she employed while in high school and then went on to explain what she did in college.

In high school I needed a quiet room, absolute quiet to study. I paced around my room and read the stuff out loud. I called out the notes out loud. I read the information out loud three times, the answer too. Then I closed my eyes and said it. If that didn't work, I'd sometimes write it three times.

For memorization, the movement and pacing and saying it out loud to myself helped. I kept moving so I didn't get bored sitting down. So far in college I don't have a lot of memorization.

In college, for the English and reading courses, I listen to the novels on tape (from State Library of Louisiana) late at night in my dorm room, after everyone else's sleeping, or have them read orally (by assistant in center). Someone reading to me's better than me reading to myself.

The center helps with my papers by using the computer, spell check, and reading it back to me. They also help me study. For reading I write the vocabulary words and definitions on note cards to study.

Paula studied the vocabulary terms for the reading course several times in the center with me. The process generally followed the same format. Paula initially wrote
several terms and definitions on one note card while sub-
vocalizing. She then read the terms and definitions on
that one card several times. This was followed by her
reading the term, looking away, and supplying the
definition. Then she covered the definition with one
hand, read the term, supplied the hidden definition, and
moved on to the next word on the card. After successfully
completing one card on her own, I called out the terms,
one at a time, and Paula responded orally with the
definition. There were approximately seven terms per
flash card.

A new card was added when mastery of the old cards
was reached. Each time, the old cards were reviewed along
with the new card being learned. As she studied the terms
on the fourth and fifth cards, she closed her eyes and
then covered her eyes with her right hand while repeating
and self-checking the words and definitions orally. After
she studied them awhile, I called them out. When the
terms on the fifth card were called out, she covered her
eyes with both hands. She then accurately responded
orally with the appropriate meaning. Approximately five
cards, with a total of thirty-five words, were learned in
a forty-five minute study session.

For math she worked on a computer program in the
library that accompanied the text for the course. She
also reviewed problems assigned by the teacher, and if she
felt like it "...might do the review in back of the
chapter." I worked with Paula in math as well. Often time was spent going over the definitions and problems which were missed on tests. (The teacher returned the student's test as well as an answer key.) Paula was often reluctant and uninterested in working on math, especially the definitions. Paula's math class met everyday; therefore, she daily had math problems to solve. "I usually work the math problems from 3 to 4 P.M. If I get aggravated, then I put it away for about 30 minutes and watch TV or eat something, and then I hit the books again. Sometime for math I use a piece of paper, make square blocks."

Paula met regularly during the week and sometimes on Sunday afternoon with a small group of classmates to rework and review math problems. They often met in the library in a carrel. "We meet and each work individually on the problem. We share answers and talk about how we worked it."

Paula also received tutoring in math from the Tutorial Center. The tutoring in the Tutorial Center, which was scheduled to meet twice a week for thirty minutes, and consisted of a tutor and a small group of three or four students.

Paula stated, "I study about every other day during the week, in the evenings, in the library. Every afternoon I work math problems in the dorm room." Paula did not generally study on the weekend, Friday or
Saturday. Once she had a math test scheduled for Monday, and her response was, "I'm too busy playing volleyball Friday and Saturday to open a book." When asked again about studying or working math problems on weekends, Paula always felt the weekends were for her and her friends although on some Sunday evenings she met in the library with two other students to work math problems.

In regard to class attendance and participation, she said, "I attend class everyday. I sit in front and ask questions if I don't understand. I can even call my math teacher at home if I'm stumped." The accommodations which Paula needed were books on tape, use of the computer and spell check for essays and papers, extended time, an oral reader, and a copy of notes.

**Obstacles**

Learning to read and spell were difficult tasks for Paula. Because reading and spelling were so difficult for her, her mother enrolled her in an O-G multisensory phonics program that met on Saturdays during the school year and consisted of a summer program as well. Paula attributed her ability to read and spell to these tutoring sessions. "Without phonics I couldn't read."

As a freshman, she found college very demanding, time consuming, and challenging. During our scheduled meetings Paula was reluctant to review and study for tests. She especially disliked discussing and looking up the definitions for the math terms missed, even though they
were on the following tests. As the semester progressed, her grades declined. She became overwhelmed with the amount of work she was having difficulty with. Math was extremely troublesome; consequently, she attended a small group tutoring session provided by the university twice a week. She also met with two classmates several times a week and on some Sunday afternoons to review and work problems. I asked her if she understood the formulas and the mathematical process. She said, "Yes, when the items on the tests were grouped in accordance with the chapter."

I then asked her if she could work the problems completely without using her notes or text, and she responded, "Not always." I recommended that she study and work the problems to the point where she did not need to rely on her textbook or notes. I suggested we try to figure out the mathematical process for the problems.

Paula felt overwhelmed with college. She felt unprepared for the course work. She also felt that she had a personality conflict with the English teacher.

College requires more time studying than high school. I have to spend more time on subjects in college than when I was in high school. Everything takes more time. I only have so much time I can spend calling out the information because it takes so much time

...difficulty with all subjects, especially math and English. In math I don't understand terms, formulas, and have trouble reading word problems.

In English, the hardest thing is putting my thoughts on paper.

English teacher just doesn't like me. She jumps all over me and yells at me if I answer wrong. I'm not
the only one she yells at. She yelled at both of the people on the sides of me.

One day we were discussing pet peeves, and she said her pet peeve was people who didn't think as fast as she did. Well, I know I don't. She just doesn't like me.

Paula also found, "...reading through the textbooks is confusing; it's too much information. With the notes, the teacher takes out the important stuff." She also expressed discontent that her high school had not adequately prepared her for college. "I should have been made to take more difficult subjects. I'm not prepared for college, especially college math. All I took was business math, consumer math, and algebra."

Reflection

When Paula was asked to respond to the reflecting process and my probing, she said, "I always feel 'Why are you asking me these questions?' Some have a point or purpose, not all of them. Sometimes I like doing it, but not always." When asked to elaborate more on those with or without a purpose, she was unable to respond beyond "I'm not sure." When asked what could she do to improve her grades, her response was,

In math I do everything to study. I work problems. I do chapter tests and reviews in the book. I work with others. In math I just make silly, simple mistakes. If I looked at it closer, I'd catch the mistakes. I made an A on one test. I really knew that information. I knew how to do it before she (teacher) taught it.

In English I made a D on a paper. I put my feelings, but not enough examples. On another paper I made an A. I used a lot of examples and put a lot of feeling
into it. I now know she wants plenty of examples and I need to pour out my feelings.

When asked to think about what she has learned about college, herself, and what she might do differently next semester, Paula answered,

College is so much harder than high school. My school should have given me prep classes in math. I shouldn't have taken business math and consumer math, and only algebra. I'm not prepared enough to handle the math in college. I should have taken the second algebra and trig (trigonometry).

I don't have enough time. It's a lot of work, manageable if you know what to do, if you can juggle everything. You have a lot more freedom. It's all up to you; no one there saying you need to do this and have you done this yet.

I'm happy with myself and where I am in life. I get along well with everyone. I have good people skills. I could get along with a lamp post if it started talking back to me.

Next semester I need to do homework in the library and not dorm room. I have to work harder in school, I guess. I'm really not sure (pause) Yeah. I guess I need to work harder. I guess I could do more before I go to bed (pause), but I'm usually finished when, by the time I have free time.
CHAPTER 6
DATA ANALYSIS

Field notes were recorded and collected throughout the study. The field notes consisted of what I observed, heard, read, and experienced. I also kept a journal of the project as it progressed and my reflective thoughts as well. The process was just as important to me as the accumulated field notes and data; therefore, the process as well as the themes and categories that emerged are discussed.

Initially, I relied on Spradley's (1980) approach for conducting observations, which he divided into three different observations. Descriptive observation was conducted to acquire an overview of the setting. In focused observations, I began to confirm domains and to ask structural questions. Then selected observations were performed where card sorting was done to form the mutually exclusive groups.

Inductive analysis was used with the data. As the interviews and field notes accumulated, I began sorting and typing each student's notes. As I sorted, I organized the information into the following general headings for each student: Demographic Information, Past School Experiences, College, and Reflection. Then I divided the college information into separate courses with the study habits and comments pertaining to each course.
The participants served as member checkers by reading a copy of the typed field notes pertaining to them for accuracy. As additional data were collected and recorded, inductive analysis continued and themes emerged. Initially, these themes were People, Accommodations, Difficulties, Tutoring, and Past Schooling. Over time, the categories were altered and consisted of Outside Forces, Internal Forces, Study Skills, Accommodations and Organization, Learning Atmosphere, Difficulties, and Reflection on Learning. The participants continued to serve as member checkers by reviewing a copy of all typed notes that pertained to them.

Due to the excessive number of typed pages and awkwardness of flipping back and forth through the participants sheets, the information was color coded according to the theme to which it pertained and transferred to corresponding colored index cards. The lines of information on the multitude of sheets were also numbered according to their appropriate themes. For example, the information falling under the theme outside forces was first highlighted in green and the lines were numbered one. The sentences were then recorded on green index cards. The information pertaining to internal forces was highlighted red, the lines were numbered two, and then the information was transferred to red index cards. The material that addressed strategies was highlighted yellow, numbered three, and recorded on yellow
The obstacles that obstructed the students' learning were numbered four, highlighted blue, and written on blue index cards. The students' reflections were numbered five, highlighted in fluorescent pink, and documented on bright pink index cards. This was done for each participant. Each index card was numbered in succession, the participant's pseudonym was written at the top, and the page number of the corresponding typed notes was above each statement in parenthesis.

The information was recorded separately for each student as a case analysis. This was so the reader could envision a clear, concise picture of each individual. According to Patton (1990, p.387), "The case study should take the reader into the case situation, a person's life...."

This was also when I started listing the individual aspects that had an effect on each participant's academic success, whether it was positive or negative. I relied on Glaser and Strauss' (1967) constant comparative analysis to categorize these aspects and ask how alike and label them with a common theme or heading. The categories were reviewed and consequently altered. The categories' titles changed as well to fit the aspects included.

**Domain Analysis**

Domain analysis (see Table 6.1 and Appendix L) helped to confirm the associations among the included terms and lead to the taxonomic analysis. Each of the categories
was defined as previously stated in Chapter 5. External forces consisted of those people or things outside the students that contributed to their academic success. Outside that particular student was defined as beyond his own control. Several elements included in the theme were tutors, parental and family support, and counseling.

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Table 6.1
Domain Analysis

<table>
<thead>
<tr>
<th>Cover Term/Domain</th>
<th>Semantic Relationship</th>
<th>Included Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Forces</td>
<td>are kinds of</td>
<td>Tutor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Friends</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Friendly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teacher</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phonics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Counseling</td>
</tr>
</tbody>
</table>

Internal forces involved those intrinsic components that enabled the student to attain some degree of academic success. They included self-motivation, drive, and personal goals. The theme strategies contained all of the study habits and techniques employed by the students, as well as the preferred learning situation. Obstacles were defined as any element that obstructed the
participants' academic success. The theme reflection was the student's analysis of self, behavior, performance, and attitudes toward learning. It consisted of the students analyzing their study habits, learning environments, practices, and responses.

As the data were typed, questions were formulated for clarity. Other data sources were used for verification and validation; resulting in triangulation of sources. Cross-case analysis was employed to determine common patterns and to note the differences among the various cases. Similarities and differences were noted between the group of students who received the O-G remediation and support services offered by the center and the group receiving only its support services.

At this point a peer debriefer reviewed the field notes, themes, categories, note cards, and method of analysis. The idea agreed upon was to continue with Glaser and Strauss' (1967) constant comparative analysis and present the themes using Spradley's componential analysis with a chart followed by a descriptive narrative. The information was continuously read and the categories reformulated. The final categories emerged as external forces, internal forces, strategies, obstacles, and reflection.

**Taxonomic Analysis**

Taxonomic analysis was completed to show the relationship among the terms within the domain. The
included terms within the domain external forces were divided into the categories people and program (see Table 6.2). The category people consisted of all of the individuals both on personal and academic levels who assisted the students in meeting academic success. The people under the heading personal assisted in developing the students' whole self, more specifically their self concepts and basic needs. The participants' friends assisted them on a personal level to help them fit in and feel a part of the group. The parents continued to provide not only moral and emotional support but financial support as well.

The friendly teacher was not necessarily one of their current content teachers. It may have been teachers they previously had or others with whom they could relate. The friendly teacher was someone on the campus who encouraged and supported them whenever necessary.

The people under the heading academic assisted the students specifically with school-related tasks. The academic people were the friends who acted as reinforcement for missed notes and/or clarity of subject matter. Friendly teachers provided the necessary accommodations and assistance so the students could academically succeed. The category academic people also included the tutors who taught the students how to study and believed in the students' capabilities.
The other category in external factors was program and included the personal and academic programs that assisted the students both with their self-esteem and with their academics. The personal program included the psychotherapy counseling that several of the students received. The therapy, categorized as a personal issue, dealt with the students’ self-esteem issues. The second factor was the academic program that encompassed all of the phonics remediation programs the students had previously received.

<table>
<thead>
<tr>
<th>People</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>Personal</td>
</tr>
<tr>
<td>Friends</td>
<td>Counseling</td>
</tr>
<tr>
<td>Parents</td>
<td></td>
</tr>
<tr>
<td>Friendly Teachers</td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>Academic</td>
</tr>
<tr>
<td>Friends</td>
<td></td>
</tr>
<tr>
<td>Friendly Teachers</td>
<td></td>
</tr>
<tr>
<td>Tutors</td>
<td>Phonics</td>
</tr>
</tbody>
</table>

The domain internal forces was divided into two groups (see Table 6.3). The first group dealt with the
students' personalities. Their personalities helped to shape the manner in which they responded to school and learning. Those who were optimistic and always saw the good side of life found it easier to continue and not give up thinking all the while that things will work out. Another personality trait was good people skills, the ability to easily converse with others. This was an asset because if they could relate with others they would feel a part of the group and often receive the needed help or understanding from others. One of the students relied on manipulative behavior with several characteristics of learned helplessness to accomplish certain tasks. Also all of the students stated how they were internally motivated to prove to everyone else that they were capable of earning a college degree.

The second group under internal forces was academics. It was the students' goal to earn a degree and pursue a professional occupation. Two students met with academic success, raised their self-esteem, and had the confidence to fulfill their scholarly goals. The third element was enjoyment of learning. Kyle stated how he now enjoyed learning math, wanted to learn more, and wanted to eventually teach math. Now that Todd was in the upper level business courses, he could see the relevance of the information being learned. Once he saw the pertinence and could apply it personally, his interest in the course was sparked and his grades improved.
Table 6.3
Taxonomic Analysis
Internal Forces

<table>
<thead>
<tr>
<th>Personality</th>
<th>Academics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimism</td>
<td>Goals</td>
</tr>
<tr>
<td>People Skills</td>
<td>Success</td>
</tr>
<tr>
<td>Manipulative Behavior</td>
<td>Enjoy Learning</td>
</tr>
<tr>
<td>Motivation</td>
<td></td>
</tr>
</tbody>
</table>

The domain strategies (see Table 6.4) was divided into four categories. The first category consisted of the places the students chose to study. The places were grouped under either on campus or off campus. The on campus included the library and dorm. The library encompassed the computer area and the carrels where the small groups met. The apartment and home were placed in the off-campus group. The second category identified the day and more specifically the time of day the students preferred to study. It was noted that none of the students chose morning to study, not even on the weekend. The third category included all of the activities the students relied on to learn. The activities were divided into those which were conducted on an individual basis and those that were performed with two or more people, constituting a group. The individual activities included
drill, reread, flash cards, and study guide. The group activities included teaching others, small study grouping, drilling orally, and summarizing. The final fourth group contained the accommodations the students relied on for equal footing.

<table>
<thead>
<tr>
<th>Place</th>
<th>Time</th>
<th>Activity</th>
<th>Accommodations</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Campus</td>
<td>Weekdays</td>
<td>Individual</td>
<td>Extended Time</td>
</tr>
<tr>
<td>Library</td>
<td>Afternoon</td>
<td>Drill</td>
<td>Computer/Spell Check</td>
</tr>
<tr>
<td>Carrel</td>
<td>Evening</td>
<td>Reread</td>
<td>Oral Reader</td>
</tr>
<tr>
<td>Computer</td>
<td>Night</td>
<td>Flash Cards</td>
<td>Books On Tape</td>
</tr>
<tr>
<td>Dorm</td>
<td>Weekends</td>
<td>Study Guide</td>
<td></td>
</tr>
<tr>
<td>Off Campus</td>
<td>Afternoon</td>
<td>Group</td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>Evening</td>
<td>Teach Others</td>
<td></td>
</tr>
<tr>
<td>Apartment</td>
<td>Night</td>
<td>Study Group</td>
<td>Orally Drill and Summarize</td>
</tr>
</tbody>
</table>

The domain obstacles (see Table 6.5) was divided into four separate groups. The first group was the grade levels in which the students had the greatest amount of difficulty. The students responded with a variety of grades being troublesome. They included first, second,
sixth, and ninth. The second group identified those particular subjects that the students stated as being arduous. Not surprisingly, they listed English, spelling, and reading as troublesome. Math and accounting were also recorded as being toilsome, especially in college. The items in the third group all pertained to the students' personality traits that interfered with their academic success. The personality group included a personality conflict with the teacher and the inability to motivate oneself to complete assignments and study. The students' misbehavior and bad attitude negatively influenced their schooling. Also under this category was friends. Two of the students felt their friends had a negative impact on their behavior, which in turn negatively affected their schooling. The fourth group was labeled other and was further divided into academic and emotional state. The academic grouping included the students believing their high school failed to provide them with the necessary curriculum to prepare them for college. This then had a domino effect on the students because they were then overwhelmed with the demands of the college courses. A third element under academics was the schools not meeting the needs of the students and forcing them to move on to another school. Either the students were treated inappropriately and chose to transfer to another school or they were so frustrated they acted out and were asked to leave. The emotional state was the second grouping under
other. The two elements that directly impacted the students' emotional state were a feeling of having an isolated disability and having an alcoholic or drug abuse problem.

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Subject</th>
<th>Personality</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Grade</td>
<td>English</td>
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</tr>
<tr>
<td></td>
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<td>Second Grade</td>
<td>Math</td>
<td>Self-Motivation</td>
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<td>Sixth Grade</td>
<td>Spelling</td>
<td>Behavior</td>
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</tr>
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</tr>
<tr>
<td></td>
<td></td>
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<td>Substance Abuse</td>
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The domain reflection (see Table 6.6) was divided into two groups. Either the students were dependent and reflected only when probed by the researcher or they were independent. The independent students were thinkers not
only when they were probed but autonomously as well. They also carried the reflection beyond the thinking aspect to the actual following through with action.

Table 6.6
Taxonomic Analysis
Reflection

<table>
<thead>
<tr>
<th>Dependent</th>
<th>Independent</th>
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<tbody>
<tr>
<td>Thinker When Probed</td>
<td>Thinker When Probed</td>
</tr>
<tr>
<td>Autonomous</td>
<td>Autonomous</td>
</tr>
<tr>
<td>Doer</td>
<td>Doer</td>
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</tbody>
</table>

Componential Analysis

Finally, componential analysis was performed within each domain to determine similarities and differences. There were five domains that emerged through the study as previously stated. Within each domain the participants had varying elements and levels of involvement. These five domains and elements were discussed as to how they impacted each student. The external auditor reviewed the data to check for biases as well as unwarranted themes.

All five of the participants definitely had external support in order to attain academic success. The types and numbers of external support varied for each
participant (see Table 6.7). The different type of support included private tutor, friends, parental and family support, friendly in-school teacher, phonics, and counseling.

Four of the five students credited an academic tutor in helping them succeed. Mrs. Feenly, Todd's private tutor from sixth to tenth grade, believed in him and demonstrated various techniques to use when studying. Kyle attributed his first taste of academic success to his algebra tutor. Dustin recalled a private tutor in first and second grade who was very beneficial. Debra received beneficial one-on-one tutoring throughout school in various subjects. Todd decided it was very beneficial to have one study partner, and Todd was the one to teach the other student because he felt to teach he had to really understand the material. Dustin found it helpful to have a friend in the class as a backup source in case something was missed or misunderstood.

Parental and family support were external forces that greatly impacted all of the participants. It was the mother who was the most predominate supporter for the students; however, Todd was highly motivated to gain his father's approval.

Three of the five participants found support from helpful teachers within the school system. Todd felt he always had one teacher in the school who would "go to bat
for him." Debra recalled how helpful and encouraging the resource teachers were in high school. They were always checking and making sure she had completed everything. Paula credited one particular teacher she repeatedly had for being invaluable.

Even though all of the students received phonics instruction, only three identified it as an element which assisted them in attaining success. Todd felt the O-G phonics program he received at night while in the eleventh grade was very advantageous. Debra accredited the O-G phonics program she received from a private tutor while in high school for improving her read and spelling. Paula attributed her ability to read to the O-G phonics program she attended on Saturdays and in the summer during her elementary and middle school years. In fact, she stated, "If I had a dyslexic child, I would make sure they had the same type of phonics instruction."

Two of the five participants attributed psychotherapy counseling as a factor in their success. Both Todd and Debra received private counseling at a young age. Todd now understood and applied the advice that his various counselors provided.

Debra acknowledged that her self-esteem and accomplishments were a product of all of the counseling she had received at a young age, especially after her horrible second grade experience.
The second domain, internal forces, contained the following elements: goals, motivation, success, people skills, optimism, and enjoy learning (see Table 6.8). All five of the participants expressed personal goals, all consisting of earning a college degree. Todd repeatedly mentioned the idea that goals and planning were important and that he encouraged others to think about their actions and goals. Kyle referred to the short-term semester goals as well as the long-term degree goal he had. Dustin, Debra, and Paula also stated that their career goals were incentives for being in college and trying so hard.

Another common internal element for all five participants was motivation. They were all aware of the necessity of personal motivation in completing difficult
tasks. All of them stated they were motivated to earn a Bachelor's degree and become successful. According to Todd, "My motivation, drive, and commitment is what made me successful. I would have found the way even without the skills." Kyle had been away from home since 16 years of age and learned the necessity of being responsible for himself and the need for self-motivation. Dustin was aware of the need for motivation though he was often unable to motivate himself to study. In fact, motivation was a problem for Dustin. As a young child, his mother was a motivating force; now it was up to him. The first two semesters of college he was motivated enough and did well. The fraternity also initially encouraged and motivated him to study and perform successfully in school, but now he seemed tired. Debra and Paula also stated that they were motivated to prove to everyone else that they were capable and not dumb. Although they all stated they were motivated, the levels of motivation varied. Todd and Kyle were highly motivated and completed tasks to their desired expectations. Dustin and Debra had a great deal of trouble with motivation and generally did just enough to pass the course. Paula was often unmotivated to put forth the extra effort needed to pass the tests.

The taste of success in high school was strong enough for both Todd and Kyle to become an internal force which assisted them in attaining academic success. Todd experienced academic success in tenth grade. He stated,
"The pivotal point in my academic career was meeting with success...when I saw that I could do it." Kyle also experienced success in his tenth and eleventh grade math classes. He stated, "The success in my sophomore algebra class and in my junior year made a big difference. It gave me the confidence." None of the other students expressed that feeling of self-success.

Todd, Debra, and Paula relied on their people skills to assist them in getting through life and some difficult times.

Todd recalled,

In second grade I was shaking this kid, and I made the kid cry. The teacher sat me down and asked me what my punishment should be and should my parents be called. I remember saying, 'Mrs. Long (pseudonym), I think if it happens again we need to call my parents.' Well, I got off scott free. How many second graders would respond like that?

Debra stated, "I'm good with people, meet someone and find out a lot about them. In school I can communicate and get what I need. I can work the system." Paula said, "I have good people skills. I get along well with everyone; age doesn't matter."

Only one student stated how he really enjoyed learning in college. Kyle stated, "Learning is fun. I enjoy getting educated now." I got the impression college was now more enjoyable for Todd also. He was enrolled in classes that interested him. He was also able to take more hours per semester because he found the information pertinent. He could relate to the subject matter in the
business courses because he was interested in learning about business operations since he planned on taking over the family company.

Another internal factor that two students talked about was happiness with themselves. Todd and Kyle each described contentment and happiness with life.

Todd stated,

I know I'm going to be all right, not worried about what I'm going to do. It always works out. I was kicked out of Hotsy Totsy School (pseudonym), but I wasn't worried. I'd already been to eight schools; I'd go to another one. It always worked out, partly just because if something doesn't work out I don't see it as not working out. Kind of like is glass half full or half empty, it's always half full.

Kyle stated, "I'm happy with where I am in life. I accept my best effort put forth. I enjoy college and learning."

When asked if they were happy with their accomplishments thus far, Dustin, Debra, and Paula all had similar responses of "Yeah, I guess so." Their actions and words often contradicted that response. Paula was unhappy with her performance in school even though she blamed it on her high school not preparing her, all of the college course work requiring so much time, and her current English teacher not liking her. Debra and Dustin both referred to what they should be doing and what they could become. Debra also complained about not being on her own and independent. She had thought that by the time she was 20 she would no longer still be living at home.
Table 6.8
Componential Analysis
Internal Domain

<table>
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<tr>
<th></th>
<th>Todd</th>
<th>Kyle</th>
<th>Dustin</th>
<th>Debra</th>
<th>Paula</th>
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<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
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<tr>
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<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
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<td>Yes</td>
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<td>No</td>
</tr>
</tbody>
</table>

The third domain was strategies. This domain had the largest number of varying elements within it (see Table 6.9). All five of the participants said they reread their notes, used the computer for essays and papers, attended classes regularly, and requested extended time for tests. Todd and Kyle, however, rarely requested extended time.

Three of the students relied on books on tape. Debra and Paula listened to not only novels on tape but also their textbooks. Todd listened only to novels on tape. Todd was the only student who studied by constructing a study guide. His private tutor first showed him how to set up one. Todd felt that the study guide was the most productive use of his time.
Both Todd and Kyle found it very beneficial to teach the material to others. While Todd worked with only one student and always taught the information for the business classes, Kyle worked with a small group of four or five and whoever solved the math problem taught the group. Kyle stated, "...to argue the point, you have to explain it, and to explain it to others, you have to really understand it."

Paula did work in a small group for math, yet she never said that she taught or explained how to solve the problems. She generally referred to the study group as, "...the people that I'm studying with help me, and I need to continue working with them."

An element which Todd and Dustin found very helpful was a teacher who could relate the information to them and make it pertinent. Todd also stated that it was beneficial for him to be able to pursue college at his own pace, not to be pressured to graduate in four years. In fact, Todd felt he would not still be in college if his father were rushing him to graduate. Debra wanted to be out on her own; therefore, I think she felt pressured to complete a degree and be financially independent. The other three participants did not mention any need to finish quickly or that they were following a specific time line. Most of the parents were not pressuring the students. The parents were simply relieved that the students were pursuing their schooling.
In regard to learning environment, there were several different locations that the participants chose to study. Paula, the only one living in a dorm, found the best place to listen to novels was in her dorm room, in bed, and late at night. She also studied every other evening during the week in the library and worked math problems in the dorm room in the afternoon from around 3 to 4 P.M. and in a small group in the library. Debra chose to study at home in her bedroom or in the study in the evenings. Todd, Kyle, and Dustin each lived in his own apartment. Todd and Kyle each lived alone while Dustin lived with his sister. Todd and, for this semester, Dustin preferred to study in their own apartments. Dustin chose to read novels late at night in his bedroom. Kyle chose the cubicles in the library for studying math in small groups.

Not only did the locations vary for the participants, but the preferred study time varied as well. Debra studied at home in her bedroom or in the study in the evenings and late at night if she had a test scheduled for the next day. Because she had a tendency to procrastinate, she was often forced to cram on the weekends. Todd chose to study in his apartment in the evenings and late at night. Kyle preferred to study in the afternoons and in the evenings. Kyle, Debra, and Paula also studied in the center in the afternoon with me. Todd, Kyle, and Paula generally did school work only during the week and allocated the weekends for themselves.
Dustin, on the other hand, found that weekends were the best time to complete assignments and prepare for tests.

In summarizing the participants choices for preferred time for learning, Kyle, Debra, and Paula studied in the afternoons. Todd, Kyle, Debra, and Paula studied in the evenings, and Todd and Debra also studied late at night. Dustin and Paula read or listened to their novels late at night. Dustin did not specify a particular time he preferred to study on weekends. He simply stated, "every now and then, when I remember to." The two participants who listened to the lecture notes, read orally, and then summarized the material were Kyle and Debra. Kyle, Debra, and Paula made flash cards. Kyle used them only for difficult listings. Debra wrote them for most of her classes when time allowed or she found the information difficult. Paula used them regularly for terms and listings. Kyle, Debra, and Paula studied by drilling the information that needed to be learned.

It was Todd, Kyle, and Dustin who identified the necessity of prioritizing and organizing their daily and weekly activities in order to accomplish their goals. However, even though Dustin stated and realized the importance of such a task, he had difficulty following through. Four of the five participants requested and relied on a copy of notes for class lectures; the only one who did not was Todd. All of the participants felt they attended classes regularly (at least 95% of the time).
The three male students stated that they were attentive in class. Kyle stated the only time he sat in front of class was in a large auditorium while the two females said they regularly sat in front of the class.

All five of the participants used a computer in the center for essays and English papers. They also all requested extended time for English papers. Now that Todd was in a higher level English class, Technical Writing, he completed most of the various forms on his own personal computer. Debra was the only student to tape lectures and rewrite notes. Although she found the process very time-consuming, she reported that it was also extremely beneficial. Both Debra and Paula relied on a reader for tests. Paula also noted that she preferred studying in a quiet room. When required to memorize difficult material, she found pacing and orally reciting the information assisted in the learning process. She occasionally used a computer program to practice math problems in the library. Paula was also the only one to attend tutoring sessions in the Tutorial Center twice a week in the afternoons.

All of the participants experienced the fourth domain obstacles. The severity and timing of these obstacles varied for the participants (see Table 6.10).

Four of the students discussed problems in school at a very early age. Todd repeated first grade and continued to have academic and behavioral troubles through tenth.
<table>
<thead>
<tr>
<th></th>
<th>Todd</th>
<th>Kyle</th>
<th>Dustin</th>
<th>Debra</th>
<th>Paula</th>
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In reality, he failed sixth grade; however, the school agreed to give him D's if he changed schools. He also failed two and a half credits in ninth grade and attended summer school to make up those credits. Staying in school was difficult for Todd.

Kyle repeated second grade, vividly recalled not wanting to attend third grade, and continued to experience difficulty until tenth grade algebra class. Debra underwent a traumatic ordeal in second grade and experienced academic difficulty throughout her schooling. Paula had difficulty learning how to read and spell in first grade; consequently, her mother enrolled her in a tutoring program. She was also placed in the resource room for various subjects throughout schooling.

Both Todd and Debra were viewed as behavior problems at an early age by some of their teachers. This was definitely a hindrance for Todd due to the fact that he had the need to fulfill his teacher's expectations. The second grade teacher's belief that Debra was a behavior problem, lazy, and lackadaisical about completing her work affected her self-esteem and learning. In second grade she hated school, and she recalled recurring thoughts of suicide. Debra also felt that she was the sole student
with a disability when diagnosed in the sixth grade. It was not until she reached high school and joined a resource group specifically for dyslexic students that she realized other students had similar problems.

Todd and Kyle both mentioned what awful attitudes they had, especially toward learning. Todd talked about being the punk of the class and having such an awful attitude that he did not allow the counseling to help. Kyle had a terrible attitude the whole while he was abusing drugs and alcohol.

Todd and Kyle realized particular friends negatively impacted their learning. Todd knew he needed to be away from the influence of his friends. His behavior and grades were better when he did not have friends around to try and impress. Also he felt that while in college it was important not to have many friends around to persuade him to party instead of study. Kyle identified the fact that going back to his old high school buddies would only influence him into getting back into using drugs and alcohol. The substance abuse had a negative impact on his attitude and behavior. The negative attitude carried over to his school work. For Kyle, substance abuse hindered his ability to meet his learning potential.

Dustin was not motivated. As a young child, he was motivated by his mother; now it was up to him. The first two semesters of college he was motivated and did well. The fraternity also initially encouraged and motivated him
to study and perform well in school. Now he seemed burned out.

Both Dustin and Paula felt their high schools had failed to prepare them for college. Dustin blamed his resource English classes for not preparing him for all of the writing required in college English classes. Paula felt her school should have encouraged and persuaded her to take Algebra II and trigonometry instead of business math and consumer math. Paula also felt college courses required too much time, and she was unprepared to handle the amount of time college demanded.

All five of the participants rated English as one of their most difficult college courses. Todd found the literature classes especially difficult because of the extensive required reading. He also felt he did not have a knowledge base that would enable him to associate and comprehend the readings. Kyle thought English was most difficult and felt he did not have a good understanding and the background necessary for college writing. He found his reading very laborious; he had to read word by word, affecting his comprehension. He also believed his spelling skills were very weak. Dustin thought English was his weakest subject and this was mainly due to his resource teachers not preparing him. Once the assistant in the center taught him and showed him how to write, he was much more comfortable. He felt he learned from his mistakes and did not repeat them. For Debra, the
difficult aspects of English were the grammar rules and spelling. Paula's major obstacle was expressing her thoughts on paper. Later she believed another obstacle was a personality conflict with her English teacher. The other courses that appeared to have given the students trouble varied. Kyle and Debra both expressed problems learning history due to the abundance of information that needed to be memorized. Dustin believed accounting was a very difficult subject with so much information to learn in such a short period of time. Paula found math just as difficult as English; she felt that she did not comprehend the terms and formulas.

The final domain was reflection. Reflection was not a common theme practiced by all of the participants (see Table 6.11). In fact, writing was a process that all of the students found difficult. Consequently, most of the reflection came from my probing the participants with eliciting questions; therefore, almost all of the reflection was reflection-on-action. The only reflection-in-action was done with those students I studied with and asked probing questions concurrently with the study sessions. The questions centered around ideas or strategies that could produce more effective learning outcomes. The dialogue of researcher and student or coach and student took the form of reciprocal reflection in action (Schön, 1987). The elements within the reflection
theme were thinker when probed, autonomous thinker, and doer.

Table 6.10
Componential Analysis
Obstacles Domain

<table>
<thead>
<tr>
<th></th>
<th>Todd</th>
<th>Kyle</th>
<th>Dustin</th>
<th>Debra</th>
<th>Paula</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Grade</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Sixth Grade</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
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</tr>
<tr>
<td>Ninth Grade</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Staying in School</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Second Grade</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Behavior</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Attitude</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Isolated Disability</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Unprepared</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Excessive Load</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>English</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Reading</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

(table continued)
Four of the five participants were able to analyze their own learning strategies employed and to evaluate learning situations when probed by me. The only participant unable to do so was Paula. She did not see a purpose and felt she was doing everything possible to learn the information already. She believed there was not anything else she could do to improve. She appeared to be in a stagnant stage. She believed, "...there was nothing else to do. I do everything I can. I just can't do math. I'm not good." Even after refreshing her memory of her high A on the second exam and having her identify why she did so well on that test, she said, "Knew the information so well." Her conclusion was, "I just can't do math."

She was caught in a paradox. She was still having problems identifying or recognizing the real problem, a recognition that in turn could aid her in finding a solution. As Schön (1987, p. 84) stated, "...wisdom can only be learned for oneself." The two older male participants, Todd and Kyle, were able to think and evaluate their own learning autonomously. They were also
the only ones who actually followed through and made adjustments with their learning procedures.

<table>
<thead>
<tr>
<th></th>
<th>Todd</th>
<th>Kyle</th>
<th>Dustin</th>
<th>Debra</th>
<th>Paula</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thinker</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When Probed</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Autonomous</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thinker</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Doer</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

TABLE 6.11
Componential Analysis
Reflection Domain
CHAPTER 7
FINDINGS, LIMITATIONS, AND FUTURE RESEARCH

Findings

The emphasis of the study changed as I previously mentioned in Chapter 1. Instead of the emphasis being directed at the remediation program and any effects it produced, the emerging emphasis was centered around the survival mechanism employed by the students. Phonics was important and necessary for all these students. All of the participants had received some form of phonics instruction and were able to rely on invented spelling. One reason they had attained their levels of academic success was the fact that they previously had received instruction in phonics and had learned to compensate with invented spelling. This supports the statement that phonics is the appropriate remediation for dyslexic students (Guyer, Banks, & Guyer, 1993; Guyer & Sabatino, 1989; Kitz & Nash, 1992; Lesnick, 1987; Lundquist, 1988; Lyon & Chhabra, 1996).

Even though all three remediated students benefited from the remediation program, it did not have a substantial, direct impact on their learning. The remediation helped to show the students syllabication, the various syllable types, and the sounds that accompany the syllable patterns. The program gave them more confidence in their abilities to decipher multisyllabic, "foreign" words when provided the necessary time to implement the tools. The reason the phonics program did not have a
direct impact on the students' learning was the process was not automatic for the students. The tools and rules were not ingrained, and consequently, the students did not think about implementing them, nor did they have the time needed to process and implement the rules during lectures. Instead, if the reading material was difficult, the students either relied on taped readings or an oral reader. Today's expanding technology poses some problems for those who help dyslexic students. Do the students really need to learn how to spell correctly? Are we helping the students by just providing the accommodations of electronic dictionary and/or spell check?

Also, these students were so occupied with meeting the demands of college life that they did not see phonics remediation as a top priority. The students felt they did not have the time to devote to learning something else that did not come naturally while they were engrossed with the demands of their courses. They felt it was more imperative that they devote their time to learning content subject matter that they would soon be tested on. Most importantly, all of the students were getting by with their accommodations and invented spelling, so they felt there was not an urgent need for learning a phonics program. Furthermore, the Orton-Gillingham remediation program did not impact the students enough to differentiate between the group receiving the remediation and the other group.
Kitz and Nash's (1992) and Lundquist's (1988) studies involved a phonics remediation program that was conducted the summer before the students were enrolled in college courses. Perhaps the program would be more beneficial to the students if they were not so preoccupied with college courses.

This multiple case study provided a closer view of how and why five dyslexic students survived and achieved academic success. It allowed us to hear their compelling stories and acquire a more concise understanding of the trials and tribulations they experienced. We learned of the survival tactics they adopted. A deeper insight into their thinking processes and personality types was also obtained. It was through critical comparative analysis that we were presented valuable understanding of the commonalties shared by the participants as well as the exceptionalities.

The learning disabled students who attain academic success and pursue a college degree are not typical of learning disabled students in general. These findings are not generalizable to the dyslexic population; however, they are generalizable to other dyslexic college students pursuing college degrees. Two key factors that enabled the students in the study to achieve academic success were their nurturing environment and their self-determination.
Original Research Questions

1. Does an Orton-Gillingham based phonics remediation program enhance learning as reflected in spelling and comprehension abilities of college students who have been identified as being learning disabled?

2. How does each student compensate to survive in school now? How will this change over time based on the instructional strategies each will learn and practice over the course of the semester?

3. What similarities and differences exist between the dyslexic college students who receive phonics remediation with an Orton-Gillingham based approach and dyslexic college students who do not receive any phonics remediation?

New Research Questions

1. What enabled the dyslexic college students who were identified as being learning disabled to attain high school graduation and pursue college degrees? How did each student compensate to survive in school?

2. How did reflective practice affect the dyslexic college students' perception of themselves as learners?

3. What similarities and differences existed among the dyslexic college students?
New Research Question 1

What enabled the dyslexic college students who were identified as being learning disabled to attain high school graduation and pursue college degrees? How did each student compensate to survive in school?

The most significant factors that enabled the students to acquire success were self-esteem, parental support and encouragement, and personal commitment. The participants' self-esteem was strengthened by tutors or teachers believing in them. The two most successful students also experienced academic success while attending high school, which consequently had a very positive effect on their self-esteem. Meeting with success was a crucial factor in motivating the students academically. The two students who had met with success were self-motivated to continue their program of study. Lesnick (1987) found success was a crucial factor in order for the students to be motivated and continue the program.

All of these students received the badly needed unconditional love and support from their parents. If these students had been in a less nurturing environment, their outcome may not have been so successful. They also had extremely strong personal determination. When so many others would have given up, these students continued to possess a high degree of stamina.
The students were taught study skills throughout the semester. They were shown how to implement various techniques when learning their subject matter. All of the students were aware of skills that enabled them to learn and be academically successful. The key was implementing them. It was up to the students. The students had to be responsible enough to continue the strategies demonstrated. They themselves made the difference. They knew what worked, and more importantly, they followed through with what they needed to do. The more mature they were, the more responsible they were and consequently the more likely they were to make the right decisions. Furthermore, maturity, self-motivation, and discipline were major factors.

The students who felt in control of their learning were achieving their academic goals. In fact, Kyle stated how he "enjoyed learning" now. Todd was now enrolled in classes he could relate to and was "interested in." This is accordance with Vogel and Adelman (1990), who found the learning disabled students who graduated did so as a result of a positive attitude toward learning.

Survival tactics were learned and employed by all of the students in order to succeed and survive academically. All of the participants used various strategies to overcome their disabilities. They also relied on accommodations. The accommodations that were relied on heavily were the use of the computer, spell check, and
extended time. The students also compensated daily in their writings with invented spelling, and this was especially true during lectures. The invented spelling was made possible by the earlier phonics instruction they had received.

Todd's strategies consisted of making study guides from the notes and the textbook, teaching the business information to a friend, setting realistic goals, being self-motivated, keeping the weekends open for himself, and taking responsibility for his learning. Kyle's strategies involved working with a study group for math courses and taking turns teaching the information, setting realistic goals, being motivated, and taking responsibility for his learning. Dustin and Debra's techniques were relaxed this semester. The strategies they already knew and learned this semester were only occasionally applied. They both generally did enough to pass the courses, and that was usually done at the last minute. Dustin read and highlighted important points. Most of the studying that Debra did occurred during our study sessions. She reread notes, highlighted facts, and in the study sessions constructed flash cards for difficult material. Debra also relied on manipulative learned helplessness behavior to accomplish certain tasks. Licht (1983) found at-risk readers develop their own behavior to cope with their failures, including the behavior learned helplessness. What made Debra different from other students discussed in the learned
helplessness literature was she did not just quit all together. She gave up doing it one way, but she was manipulative in getting someone else to do the tasks or change the tasks to meet her convenience. The study habits Paula applied in high school were not implemented in college. One reason was she felt she did not have any courses that required a great deal of memorization. Paula found the small study group for math helpful. During our study sessions she wrote note cards for terms in math and reading. We also drilled the information orally. She was the least receptive to suggested strategies and believed she was currently using the best practices.

New Research Question 2

How did reflective practice affect the dyslexic college students' perception of themselves as learners?

Two of the participants were already accustomed to reflecting on personal goals; however, none of the participants participated in reflection-on-learning before the study. Also none of the students were comfortable with recording their reflective thought process on paper. As previously mentioned, it became imperative that we meet once a week and orally discuss their reflections.

Todd and Kyle, the two older students who were more comfortable with the reflection, gained merit. They were open to recommendations and more aware of what study techniques were successful or unsuccessful and the reasons
why. They adjusted their learning throughout the semester. The reflection assisted them in becoming much more conscious of beneficial strategies to employ as well as identifying the unavailing techniques. They were the most willing participants to attempt and assay suggestions. The reflection helped them plan for the next time and determine beneficial alternatives.

Todd and Kyle participated in reflection and had a clearer understanding of their learning as well as felt more in control of their learning and their desired outcome. They reflected on study practices and tests, and adjusted their learning strategies, and consequently, their grades improved. They also felt like they had more control over their academic outcome.

Dustin and Debra, who analyzed their learning and study practices but did not follow through with their own recommendations, were unsuccessful in improving their grades. They also did not express that sense of control over learning that Todd and Kyle described.

Paula was unable to reflect on her learning and develop new strategies to improve her grades. She believed she was already doing everything possible. She also never discussed a feeling of control over the outcome of her courses. Instead, she believed it was either in the hands of the instructor or the fault of her school for not preparing her for college.
In accordance with these findings, "students who understand the precise relationship between the skills necessary to complete them at a satisfactory level, and the grades they can expect to receive in acknowledgment of their efforts, are more likely to perceive control over their grades and perform up to their ability" (McKean, 1994, p. 461).

Dustin could never autonomously procure motivation enough to follow through with the strategies learned to reach his academic potential. He theorized that a major hindrance in acquiring motivation was having an excess of free time. Debra procrastinated and waited to study with me. When we were unable to cover all of the information, she was forced to cram at the last minute. She too was very aware of the strategies that would enable her to be much more successful in college even though she failed to implement them. Both Dustin and Debra were receptive to suggested strategies and would discuss when or how they could or should have been implemented. Paula was younger and becoming acclimated to college life and all of the freedom and responsibility that accompanied a first-time freshman living away from home. She believed she was already doing everything possible to master the subject matter; consequently, she was the least receptive to the recommended learning techniques.

In the end, when everything is considered, it is the student who makes the difference and takes responsibility
for his learning. Thus, Todd began constructing study guides from his economics textbook after he had analyzed where most of the economic tests were derived from. He also became more conscious of what would and would not work for particular subjects. For business law he felt it would have been a waste of time to make a study guide from the text due to the small amount of information on the tests taken from the text. Kyle started reading a daily newspaper in order to keep abreast of the current events happening in the world because this was an area he was having difficulty with on history tests. Before we began the reflection, he rarely thought of tests once they were taken. Dustin and Debra realized and commented on the usefulness of strategies such as prioritizing and organizing. Unfortunately, they neglected to pursue them. Paula seemed to become aggravated as the semester progressed, often finding excuses for her declining grades. The strategies were never seen as pertaining to her or as being helpful.

Reflection aids the learner when they not only think of additional ways to improve their learning but also follow through with the new process. The two participants who were engrossed in the reflective process gained merit, and their tests scores improved as they adjusted their learning. The problem is no one can be forced to do something he is not ready or interested in doing. Just as
Kottkamp (1990) believes, I too found the reflective process powerful for those who desired to participate.

New Research Question 3

What similarities and differences existed among the dyslexic college students?

There were similarities and differences among all the participants regardless of the O-G program. All the students displayed spelling and English difficulties. They came from similar socio-economic backgrounds. All these students were fortunate to have such dedicated and concerned parents. They all received family support and encouragement as well as tutorial assistance when necessary. They also all desired college degrees. They all felt they were at least getting by, especially with the accommodations of computer, spell check, and extended time. They were very cooperative and willing to participate in the study.

The majority of differences that existed among the students included what times and places they chose to study as well as what strategies they employed when learning. These are the typical differences that are found in all students. Another difference was the severity of the hardships encountered in school, but the biggest difference among the students was how they confronted learning. Either the participants were responsible and motivated and accepted learning as
something they could handle, or they were accustomed to relying on others for assistance.

The two older students were more than just motivated and ready; they acted upon it and took responsibility for their own learning. The difference in taking responsibility for their own learning came from their having met success while in high school. In tenth grade Todd was no longer being tutored by Mrs. Feenly; he was successfully implementing the strategies on his own. After Kyle was shown how to solve algebra problems, he became confident enough in working a problem to break it down and understand the operation(s). The idea that others believed in these students and did not give up on them was crucial. Having someone continually encouraging and believing in them and having the opportunity to be successful in school increased these students' self-esteem tremendously. The taste of academic success was very powerful, and it happened at a crucial time in their lives. This was supported by Coley and Hoffman (1990), who found that at-risk students need to see themselves as capable of learning and succeeding in order to triumph.

It was Bolaski and Gobbo (1991) who stated that the success of the program was partially based on the students' active involvement in their own learning. It was Todd and Kyle who both regarded themselves as the number one contributor to their learning and academic accomplishments in college. The other three students were
not as involved or in control of their learning and consequently were not achieving their academic goals.

The students experienced various trials and tribulations throughout their schooling. The degree of difficulty and/or success was unique as well. Their stages of life while experiencing these critical happenings varied. All these factors together affected the growth and development of the participants.

**Limitations**

As with any study involving human participants, there are limitations. The first and most predominant limitation of this study was the fact that all of the participants had received some form of phonics remediation prior to entering college. Though the phonics programs that the students received varied, they were all exposed to the sound-symbol relationship. It was fortunate for them that they were exposed to phonics and consequently were able to rely on invented spelling. Without this prior knowledge, they might not have been so successful.

Second, there is no way for the researcher to accompany all of the participants continuously over an extended period of time. Thus, there are gaps in the documentation. This was even more difficult due to the fact that college students attend classes all over the campus at various times and on different days.

Third, due to the fact that most of the participants were not accustomed to thinking, analyzing, and reflecting.
on their actions, the majority of the students did not rely on reflection as a common practice. Their learning process along with how they attained academic success was not something they thought about or verbally expressed. It then became my role to probe and question the participants to acquire relatively complete accounts of their learning process.

Fourth, due to the different personality types, attitudes, and maturity levels of the participants, the amount of responsibility they accepted for their own learning varied. Because each student is unique, they are going to differ. However, those students who were most successful were responsible and named themselves as the primary one responsible for their own learning. Their attitude affected greatly the quality of their learning and success. The reason I chose this particular setting was, as an employee of the Dyslexia Center for the past five years, I felt that the students would be comfortable working with me and open to sharing information. I believe the participants did feel comfortable and the amount and depth of information they were willing to share were determined more by their personalities.

The fifth limitation is in regard to researcher biases and the difficulty of remaining as objective as possible throughout the study. The limitation was based on my having worked with most of the participants for the previous two to three years. I was very familiar with
four of the five students before the study began; consequently, I may have carried over some preconceptions ideas into the study.

The sixth and most difficult aspect of the study was wanting to provide suggestions and advice when the participants were analyzing or attempting to analyze their current study practices. Instead, it became very beneficial for me to keep a personal journal and record my thoughts and experiences. It was also extremely helpful to discuss issues and concerns with the peer debriefers.

**Future Research**

Qualitative research does not profess to generalize to the masses. Instead, it gives insight to those who were studied. It can also bring about new areas of interest to study; consequently, this study has sparked other areas of inquiry. The impact that high school academic success has on dyslexic students especially in regard to their self-esteem is an area worth researching. Another area worth pursuing would be a study focusing on motivating and encouraging the students to take responsibility for their learning as well as educating the parents on their crucial role as supporters. The issue of technology and the role it plays in dyslexic students' acquisition of knowledge is also an area deserving study.

**Personal Response**

It is only through our quest for a more literate society that we will come to understand and conquer that
which obstructs the academic success of intelligent, capable students.

Epilogue

The students were asked to share any advice that would assist other dyslexic college students in attaining academic success. Todd stated, "Don't set yourself up to fail. Don't think there's no way you can do it. Because if you think you can't when you get a project and you're already thinking you can't you won't. Get in the right mode. Get a project and you'll do it." Kyle's advice was, "Study; keep up with school work, especially high school. Study, stick with it, and don't give up. Ask for help. Go to all your classes. Don't put things off, because when you fall behind you can't catch up. Get reinforcement of basic education, phonics, reading, and study skills." Dustin said, "Pay attention in high school, do the work, try harder, and lighten up on being a goof off. Be prepared to go to class. A time to go out and a time to go to school. Not all classes are easy." Debra's words of advice were, "Don't give up. Get organized and use time management. Study and keep up." Paula's advice was, "Get organized. Do anything they need to learn to read, study skills, phonics. Take all those prep courses in high school and if they really want to pass, not to joke around." Todd also included advice for parents of dyslexic students. He stated, "Parents, be
supportive. If treating them like failures they'll act like failures. Just got to let them know they can do it."
REFERENCES


Adams, M. J. (1997, Fall). About the NICH program of research on reading development and disorders. Perspectives, 23, 1, 5.


Center for the Study of Dyslexia. (1996). Center for the study of dyslexia offers a program to college students with dyslexia [Brochure]. Thibodaux, LA: Author


Rehabilitation Programs

1. Alphabetic Phonics
   Orton-Gillingham based
   (Aylett Cox at the Texas Scottish Rite Hospital in Dallas, Texas)

2. Wilson Reading System
   Orton-Gillingham based
   (Barbara Wilson at the Wilson Learning Center in Hopedale, MA.)

3. Simultaneous Multisensory Phonics
   (Lesnick at a community college in the Bronx)

4. Project Success
   Orton-Gillingham based
   Simultaneous
   (Robert Nash at the University of Wisconsin, Oshkosh)

5. Landmark College
   (Putney, Vermont)

Emphasis of the Program

Multisensory instruction of the alphabet, dictionary skills, reading accuracy, spelling, cursive handwriting, listening comprehension, reading comprehension, expression (For children and adults)

Multisensory, systematic, sequential, and cumulative reading and writing program (Phonological coding system) (For children and adults)

Multisensory phonics focusing on decoding and encoding, basic phonics, word attack skills, structure of words in regard to grammatical rules, the writing process explicitly explained, demonstrated, and practiced (For adults)

Multisensory instruction in the sound symbol assignment, remediation in reading, writing, spelling, and talking. (For adults) Addresses social skills.

Remediation in oral reading, oral and written comprehension, spelling, listening, reading comprehension, and study skills. Addresses social skills.
### APPENDIX B

**PARTICIPANT SELECTION**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Average Score</th>
<th>83%</th>
<th>50%</th>
<th>17%</th>
<th>7%</th>
<th>1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile Score</td>
<td>75.00%</td>
<td>82%</td>
<td>58%</td>
<td>70.20%</td>
<td>76.90%</td>
<td>6.70%</td>
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<tr>
<td>Oral Deviations</td>
<td>22.90%</td>
<td>39.40%</td>
<td>76.83</td>
<td>78.20%</td>
<td>72.20%</td>
<td>31.20%</td>
</tr>
<tr>
<td>Voc. Read. Total</td>
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<td>14.60%</td>
<td>22.10%</td>
<td>22.20%</td>
<td>32.20%</td>
<td>6.70%</td>
</tr>
<tr>
<td>Compreh. Own</td>
<td>76.83</td>
<td>68.90%</td>
<td>8.9%</td>
<td>40.70%</td>
<td>6.70%</td>
<td>33.30%</td>
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<td>Compreh. Read</td>
<td>80.0%</td>
<td>72.20%</td>
<td>16.17%</td>
<td>19.70%</td>
<td>33.30%</td>
<td>12.50%</td>
</tr>
<tr>
<td>Read. Total</td>
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<td>16.17%</td>
<td>19.70%</td>
<td>33.30%</td>
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</tr>
<tr>
<td>SDQ III Academic</td>
<td>Below 25%</td>
<td>59.75%</td>
<td>23.00%</td>
<td>19.00%</td>
<td>15.00%</td>
<td>10.00%</td>
</tr>
</tbody>
</table>

**Table Notes**

- The table includes data on various educational and psychological assessments.
- The averages and percentages are shown for different categories such as profile scores, oral deviations, and other educational metrics.
- The table is designed to provide a comprehensive overview of participant selection criteria.

171
<table>
<thead>
<tr>
<th>Number</th>
<th>Screening 1</th>
<th>Screening 2</th>
<th>Family</th>
<th>Income</th>
<th>Sex</th>
<th>Age</th>
<th>Classif</th>
<th>GE Spelling Total</th>
<th>GE Reading Total</th>
<th>GE Sound Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debra</td>
<td>1</td>
<td>Traditional</td>
<td>75-100</td>
<td>F</td>
<td>20</td>
<td>Soph</td>
<td></td>
<td>92%</td>
<td>84%</td>
<td>66%</td>
</tr>
<tr>
<td>Dustin</td>
<td>2</td>
<td>Traditional</td>
<td>51-75</td>
<td>M</td>
<td>20</td>
<td>Soph.</td>
<td></td>
<td>60%</td>
<td>75%</td>
<td>48%</td>
</tr>
<tr>
<td>Kyle</td>
<td>3</td>
<td>Traditional</td>
<td>75-100</td>
<td>M</td>
<td>21</td>
<td>Soph</td>
<td></td>
<td>83%</td>
<td>85%</td>
<td>67%</td>
</tr>
<tr>
<td>Paula</td>
<td>4</td>
<td>Traditional</td>
<td>25-50</td>
<td>F</td>
<td>19</td>
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<td></td>
<td>83%</td>
<td>94%</td>
<td>76%</td>
</tr>
<tr>
<td>Todd</td>
<td>5</td>
<td>Traditional</td>
<td>75-100</td>
<td>M</td>
<td>21</td>
<td>Soph</td>
<td></td>
<td>94%</td>
<td>99%</td>
<td>72%</td>
</tr>
</tbody>
</table>

**Note.** Classif = Classification

GE Spelling Total = The total score earned on the spelling section of the Gallistel-Ellis Test expressed as a percent.

GE Reading Total = The total score earned on the oral reading of words in isolation on the Gallistel-Ellis expressed as a percent.

GE Sound Total = The total score earned on the identification of sounds section of the Gallistel-Ellis Test expressed as a percent.
<table>
<thead>
<tr>
<th>GO Own Compreh Total</th>
<th>GO Read To Compreh Total</th>
<th>GO Total Deviations From Text</th>
<th>SDRT Voc # Read Own</th>
<th>SDRT Voc % Own</th>
</tr>
</thead>
<tbody>
<tr>
<td>19=76%</td>
<td>20=80%</td>
<td>35</td>
<td>23</td>
<td>77%</td>
</tr>
<tr>
<td>22=88%</td>
<td>24=96%</td>
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<td>23=92%</td>
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<td>18=72%</td>
<td>22=88%</td>
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<td>22</td>
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<td>23=92%</td>
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<tr>
<td>21=84%</td>
<td>22=88%</td>
<td>10</td>
<td>28</td>
<td>93%</td>
</tr>
</tbody>
</table>

**Note.** GO Own Compreh Total = The total comprehension score on Gray Oral Reading Test when read by the student. The number represents the number they answered correctly and the percentage is their number score computed to a percent.

GO Read To Compreh Total = The total comprehension score on Gray Oral Reading Test when read to. The number represents the number they answered correctly and the percentage is their number score computed to a percent.

GO Total Deviations From Text = The total oral deviations from text on Gray Oral Reading Test.

SDRT Voc # Read Own = The number of correct vocabulary answers on Stanford Diagnostic Reading Test when read by the student.

SDRT Voc % Own = The number score earned by the student on the vocabulary section of the Stanford Diagnostic Reading when read by the student was then computed to a percentage score.
### Table: SDRT Voc % Read To, SDQ III Academic Score, SDQ III General Score

<table>
<thead>
<tr>
<th>SDRT Voc # Read To</th>
<th>SDRT Voc % Read To</th>
<th>SDQ III Academic Score</th>
<th>SDQ III Academic %</th>
<th>SDQ III General Score</th>
<th>SDQ III General %</th>
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<td>24</td>
<td>80%</td>
<td>51</td>
<td>29%</td>
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<td>97%</td>
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<td>25%</td>
<td>80</td>
<td>69%</td>
</tr>
<tr>
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<td>36%</td>
<td>80</td>
<td>69%</td>
</tr>
<tr>
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<td>60</td>
<td>50%</td>
<td>94</td>
<td>98%</td>
</tr>
<tr>
<td>26</td>
<td>87%</td>
<td>60</td>
<td>50%</td>
<td>94</td>
<td>98%</td>
</tr>
</tbody>
</table>

**Note.** SDRT Voc % Read To = The number of correct vocabulary answers on Stanford Diagnostic Reading Test when read to the student.

SDRT Voc % Read To = The number score earned by the student on the vocabulary section of the Stanford Diagnostic Reading when read to the student was then computed to a percentage score.

SDQ III Academic Score = Score earned on the academic section of the Self Description Questionnaire III

SDQ III Academic % = The percentage earned on the academic section of the Self Description Questionnaire III - based on age and sex.

SDQ III General Score = Score earned on the general section of the Self Description Questionnaire III

SDQ III General % = The percentage earned on the general section of the Self Description Questionnaire III - based on age and sex.
<table>
<thead>
<tr>
<th>SDQ III Verbal Score</th>
<th>SDQ III Verbal %</th>
<th>SDQ III Emotional Score</th>
<th>SDQ III Emotional %</th>
<th>SDQ III Total Score</th>
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</thead>
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<tr>
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<td>24%</td>
<td>793</td>
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<td>18%</td>
<td>67</td>
<td>85%</td>
<td>845</td>
</tr>
</tbody>
</table>

**Note.** SDQ III Verbal Score = Score earned on the verbal section of the Self Description Questionnaire III

SDQ III Verbal % = The percentage earned on the verbal section of the Self Description Questionnaire III - based on age and sex.

SDQ III Emotional Score = Score earned on the emotional section of the Self Description Questionnaire III

SDQ III Emotional % = The percentage earned on the emotional section of the Self Description Questionnaire III - based on age and sex.

SDQ III Total Score = The total score earned on the Self Description Questionnaire III.
<table>
<thead>
<tr>
<th>Number</th>
<th>Screening</th>
<th>GO Own Compreh Total</th>
<th>GO Read To Compreh Total</th>
<th>SDRT Voc % Own</th>
<th>SDRT Voc % Read To</th>
</tr>
</thead>
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<td>Debra</td>
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<td>80%</td>
</tr>
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<td>83%</td>
<td>90%</td>
</tr>
<tr>
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<tr>
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<tr>
<td>Kyle</td>
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<td>87%</td>
<td>87%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>23=92%</td>
<td>21=84%</td>
<td>73%</td>
<td>93%</td>
</tr>
<tr>
<td>Paula</td>
<td>4</td>
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<td>17=68%</td>
<td>73%</td>
<td>77%</td>
</tr>
<tr>
<td></td>
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<td>17=68%</td>
<td>20=80%</td>
<td>73%</td>
<td>80%</td>
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<tr>
<td>Todd</td>
<td>5</td>
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<td>87%</td>
<td>90%</td>
</tr>
<tr>
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<td>21=84%</td>
<td>22=88%</td>
<td>93%</td>
<td>87%</td>
</tr>
</tbody>
</table>

GO Own Compreh Total = The total comprehension score on Gray Oral Reading Test when read by the student.
The number represents the number the student answered correctly, and the percentage is their number score computed to a percent.

GO Read To Compreh Total = The total comprehension score on Gray Oral Reading Test when read to the student.
The number represents the number the student answered correctly, and the percentage is their number score computed to a percent.

SDRT Voc % Own = The number correct computed to a percentage score for the vocabulary section on the Stanford Diagnostic Reading Test when read by the student.

SDRT Voc % Read To = The number correct computed to a percentage score for the vocabulary section on the Stanford Diagnostic Reading Test when read by the student.
Dear Student,

I am a graduate student at Louisiana State University in Baton Rouge. As part of the requirements for my degree, I will be conducting a study with six dyslexic college students enrolled in the Dyslexia Center at XXXXXXXXX University. I am interested in studying what enhances dyslexic students' learning, specifically reading and spelling. I am also interested in the coping and survival techniques dyslexic adult college students utilize in the academic setting.

As a participant in the study, a screening will be conducted in the summer of 1997 and the study will actually take place during the 1997 Fall semester.

The study will consist of me observing, interviewing, administering screening instruments, talking with you, and collecting work samples and journal reflections. The interviews and discussions will be audio taped. The journal entries may be audio taped. I will meet individually with each of you weekly to discuss journal entries and academic happenings.

The study will also consist of me observing and recording notes during the time you spend in the Dyslexia Center receiving the support services offered.

Three students will be randomly selected to receive an Orton-Gillingham remediation reading, spelling, and writing program in addition to the services offered at the Center. I will conduct the remediation individually for 45 minutes every week during the 1997 fall semester in the Dyslexia Center. Observations, work samples, and notes will be collected during the remediation period.

Each of you will remain anonymous throughout the study.

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Thank you for your cooperation, participation, and support in this study. It is only with your help that we can learn together.

Sincerely,

Fran G. Crochet

I _____________________________ agree to participate in Fran Crochet's study at XXXXXXXXXX University. I will participate in the screening tests, interviews, discussions, remediation, and journal reflections in addition to the services offered at the Center. I understand the interviews, discussions and journal entries may be audio taped. I further understand my identity will remain anonymous.

Student Signature _____________________________  Date ____________
APPENDIX F

LSU/PBRC: HUMAN RESEARCH SUBJECTS APPLICATION FOR EXEMPTION FROM INSTITUTIONAL OVERSIGHT

APPENDIX F
LSU/PBRC: HUMAN RESEARCH SUBJECTS APPLICATION FOR EXEMPTION FROM INSTITUTIONAL OVERSIGHT
LSU Office of Sponsored Research/OSR 388-5692; FAX 6792

LSU/PBRC: HUMAN RESEARCH SUBJECTS
APPLICATION FOR EXEMPTION FROM INSTITUTIONAL OVERSIGHT

ALL LSU/PBRC research/projects using living humans as subjects, or samples or data, obtained from them, directly or indirectly, with or without their consent, must be approved in advance by the LSU/PBRC Institutional Review Board (IRB), unless they meet the criteria for exemption from IRB oversight and are exempted.

This form helps the PI determine if the project can be exempted, and is used to request an exemption. NOTE: A determination of Exempt status does not release the researcher from exercise of prudent practice in protecting the interests of research subjects, including obtaining informed consent. Exempt research must be conducted in a manner consistent with the Ethical Principles and Guidelines for the Protection of Human Subjects (Belmont Report) and LSU Guide to Informed Consent; documents available from OSR or http://www.osr.lsu.edu/osr/comply.html.

Instructions: Complete checklist, pp 2-4. If project appears to qualify for exemption, send 2ccs of completed form and a brief project protocol (adequate to evaluate risks to subjects and your responses to Parts A & B). Otherwise, submit to IRB (see below).

Principal Investigator: Frances G. Crockett
Student? ( )
Ph: 388-6807

Department/Unit: College of Education

Project Title: Dyslexic Adults: Quest for Literacy

Agency expected to fund project

Subject pool (eg Psychology students): Dyslexic College Adults

Are any of the following "vulnerable populations" to be used in the study: (children <18; the mentally impaired, pregnant—women, prisoners, the aged, other)? (circle those applicable) ( )

I certify my responses are accurate and complete. If the project scope or design is later changed I will resubmit for review.

PI Signature: Frances G. Crockett Date 6/26/97 (no per signatures)

Screening Committee Action: Exempt ( ) Not Exempt ( )

Recommended for: Expedited (2 cc) or Full ( ) IRB Review.

* PI: Obtain the IRB forms packet: send 11 copies plus 1 cc of any associated grant proposal to the address below.

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The project listed has been reviewed by the Nicholls State University Human Subjects Institutional Review Board, in accordance with Federal Drug Administration regulations (45 CFR 46) and Nicholls State University guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 9708001
PROJECT TITLE: Dyslexic Adults: Quest for Literacy
PROPOSED PROJECT DATES: 08-15-97 to 08-15-98
PROJECT TYPE: LSU Dissertation
PRINCIPAL INVESTIGATOR(S): Frances Crochet
FACULTY SUPERVISOR: 
OTHER INVESTIGATORS: 

COLLEGE/DIVISION: College of Education
DEPARTMENT: Center for the Study of Dyslexia
FUNDING AGENCY/SPONSOR: None

HSIRB REPRESENTATIVE ACTION: Expedited Review/Approved
PERIOD OF APPROVAL: 08-15-97 to 08-15-98

This research project has been reviewed and approved by the LSU Human Subjects Institutional Review Board.

J. Steve Welsh, Ph.D., Chairperson
Human Subjects Institutional Review Board
Nicholls State University

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1. State what you hope to accomplish/goals.
2. Summarize your studying process (when, where, how long, subject/course, and what you did).
3. Evaluate the process (Successful or not? Did you accomplish what you intended to do?)
4. What have you learned from the process?
5. What will you do differently next time?
6. What do you predict you will make on test or assignment?
7. How well did you do on the test or the assignment?
8. Why? Evaluate the process.
9. Express your thoughts, concerns, and feelings about school. What could or should you do differently?
APPENDIX I
INTERVIEW QUESTIONS

1. Describe your experience in elementary school.
2. Describe your experience in middle school.
3. Describe your experience in high school.
4. How do you feel about school now?
5. What subject is the easiest for you? Why?
6. What subject is the most difficult? Why?
7. What else could the center do to help you?
8. What aspect of college do you like best?
9. Why are you attending college?
10. Who has been the most influential person in your life?
11. Who helps you the most in college? How?
12. What accommodations do you need to succeed in college?
13. How often do you study?
14. When do you study?
15. Where do you study?
16. How long do you study at a sitting?
17. Do you reread your notes? How often?
18. Do you rewrite your notes?
19. Do you get a copy of someone else's notes?
20. Do you transfer information on note cards?
21. Do you construct outlines, charts, maps?
22. Do you copy diagrams and label them?
23. Do you color code information or charts?
24. Do you listen to novels and/or textbooks on tape?
25. Do you study with a buddy? What subject(s)? Why?
27. Do you skim the chapter first?
28. What do you do when you get to words you do not know?
29. How often do you attend class?
30. Where do you sit in class?
31. Do you ask questions in class if you do not understand?
32. Do you participate in class discussions? Which classes?
33. What study skill(s) works best for you?
34. What skill(s) have you tried that does not work?
35. Who helped you the most to get where you are today?
36. How do you study?
37. Rate yourself as a student.
38. What suggestion(s) do you have for other dyslexic students?
39. Can you determine how well you'll do in a class early on?
40. Rate and describe your people skills.
41. What are your goals?
42. What is your outlook on school?
43. What are the reasons you survived in school?
44. Do you enjoy reading?
45. Do you read for pleasure?
46. Rate yourself as a reader.
47. How is your comprehension?
48. What helps you learn?
49. What do you read?
50. What have you learned this semester?
51. Have you ever received counseling? Was it helpful?
52. What are your goals in life?
53. Describe an ideal teacher.
APPENDIX J
QUESTIONNAIRE

Name ____________________________ Date __________
Age ____________________________ Sex __________
Classification: _____ Freshmen _____ Sophomore
______ Junior ______ Senior

Number of hours taken a semester __________________

Degree pursuing _________________________________

GPA __________________

Do you attend summer school? Yes ___ No ___

Do you live at home? Yes ___ No ___

Do you live in the dorm? Yes ___ No ___

Do you live in an apartment? Yes ___ No ___

Do you have a roommate? Yes ___ No ___

Do you work? Yes ___ No ___

If yes, number of hours a week ________________

High school attended ________________________________

Did you receive tutoring in elementary school? ______

What subjects? _________________________________

Did you receive tutoring in middle school? ___________

What subjects? _________________________________

Did you receive tutoring in high school? ___________

What subjects? _________________________________

Were you in resource? ___________________________

When? _____________________________

For what subjects? ___________________________

Do you receive tutoring in college? _______________
What courses? 

Who helps you the most with your college work? 

Parents:  ____ Married  ____ Divorced  ____ Deceased

Parents Income:  ____ below 25,000  ____ 25,000-50,000  
  ____ 50,000-75,000  ____ 75,000-100,000  ____ above 100,000
### APPENDIX K
#### PRESENTATION OF CARDS

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<thead>
<tr>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
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**Note.** Sounds worked on:

- Kyle
- Debra
- Paula
## APPENDIX L
### DOMAIN ANALYSIS

<table>
<thead>
<tr>
<th>Cover Term/Domain</th>
<th>Semantic Relationship</th>
<th>Included Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal Forces</strong></td>
<td>are kinds of</td>
<td>Goals, Motivation, Success, People Skills, Enjoy Learning, Optimism/Happy</td>
</tr>
<tr>
<td>Strategies</td>
<td>are kinds of</td>
<td>Reread, Computer/Spell Check, Extended Time, Books on Tape, Study Guide, Teach Others, Teacher Relate, Own Pace, Dorm, Apartment, Home, Library, Afternoon, Evening, Late at Night, Study Center, Weekdays, Weekends, Small Group, Orally Drill and Summarize, Flash Cards, Prioritize and Organize, Copy of Notes, Attend Class, Attentive, Sit in Front, Papers-Center, Extended Time on Papers, Tape Record, Rewrite Notes</td>
</tr>
</tbody>
</table>
Obstacles are kinds of
Reader - Tests
Quiet Room
Pacing
Computer
Program
Tutorial Center
First Grade
Sixth Grade
Ninth Grade
Second Grade
Staying in School
Behavior
Attitude
Isolated Substance Abuse
Friends
Unprepared
Excessive Load
English Reading
Personality Conflict
History
Spelling
Writing
Accounting
Math

Reflection are kinds of
Thinker When Probed
Autonomous Thinker
Doer
VITA

Frances Grace Crochet was born on November 16, 1961, in Monroe, Louisiana, to William L. Grace III and Sandra S. Grace. She attended parochial schools in Thibodaux, Louisiana, and graduated from Edward Douglas White Catholic High School. She received an associate of science degree in apparel merchandising in 1981 and a bachelor of arts degree in elementary education in 1983 from Nicholls State University.

Fran began teaching first grade at Bayou L’Ourse Primary in Assumption Parish in 1984. It was during her six years at Bayou L’Ourse that she earned a master’s degree in education from Nicholls State University. Then in 1990 she transferred to Lafourche Parish and taught first grade at Thibodaux Elementary for one year. The next two and a half years were spent instructing the Developmental Reading Courses at Nicholls State University, and from 1994 until 1997 she was employed in the Dyslexia Center at Nicholls State University. In January of 1998 she began working with the special education program in Lafourche Parish at St. Charles Elementary. Fran is currently completing the requirements for the degree of Doctor of Philosophy in Curriculum and Instruction from Louisiana State University in Baton Rouge, Louisiana.
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Frances Grace Crochet

Major Field: Curriculum and Instruction

Title of Dissertation: Dyslexic College Students: Quest for Literacy

Approved:

[Signatures]

Major Professor and Chairman
Dean of the Graduate School

EXAMINING COMMITTEE:

[Signatures]

Date of Examination: May 20, 1998

[Signature]

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