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Self-Perceptions as Writers of Written Language Learning Disabled Students

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SELF-PERCEPTIONS AS WRITERS OF WRITTEN LANGUAGE LEARNING DISABLED STUDENTS

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SELF-PERCEPTIONS AS WRITERS OF WRITTEN LANGUAGE LEARNING DISABLED STUDENTS

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This qualitative descriptive study sought to describe the self-perceptions as writers of written language learning disabled students who are able to use the Alpha-Smart Pro personal computer for written language assignments. The participants were two sixth-grade students each with a verified learning disability in the area of written language. The participants were one male and one female.

Data were collected over a six week period and included interviews, Q-Sort, observations and written work samples. Data analysis occurred during and after the six weeks of data collection.

The study discovered, a) the female participant used writing regularly in her life as a means of self-expression, b) both participants perceived themselves to use rewriting/ revision when in fact they used editing, c) the female participant perceived herself to use poetry as a way to improve a bad mood. This was unable to be founded since the poetry was not seen by the researcher, and d) the Alpha-Smart was not mentioned by the participants during interviews however, Alpha-Smart use was seen during classroom observations.

This study was different than the quantitative research previously completed in the areas of computers and classroom writing and self-perceptions of learning disabled students in that prior research compared learning disabled students to non-learning disabled classmates. The results of the prior studies indicated lower self-perceptions of students with learning disabilities than those students without leaning

disabilities. The present study did not conduct comparisons but rather aimed to describe self-perceptions as the students saw themselves. The results indicated that despite the fact that the participants writing was below sixth grade level the participants perceived themselves to be good writers.

Implications for teachers included several suggestions: (a) provide various writing opportunities, as opposed to just academic writing, to written language learning disabled students; (b) allow learning disabled students to discuss their self-perceptions of their abilities without asking for a comparison of themselves to other non-learning disabled students, doing so will potentially allow the students to positively discuss their own self-perceptions; and (c) teach revision skills in a hands-on repeated practice style so as to ensure the successful application of the skill.

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Chapter 1: Introduction

Background

In September of 1997, a new sixth grade student named Chris transferred into the school where I was the special education teacher. This student received special education services in his previous school and in accordance with our school district guidelines, I reviewed his files to determine if he were eligible to receive services in our district. In the process of review it was determined by his multi-disciplinary team (MDT); a fellow special education teacher and the school psychologist, and myself, that he qualified for special education services as a written language learning disabled (WLLD) student. In addition, he qualified as behavior disordered (BD). In helping to create an Individualized Educational Plan (IEP), I became intrigued with Chris' written language disability and his above average intelligence ability. By definition, in Nebraska, a learning disability is a severe discrepancy (of at least 20 points) between achievement and intellectual ability in one or more academic areas (Rule 51, code 006.04J3)(Appendix E). In his classroom performance I observed that he showed a major frustration in writing assignments perhaps due to his inability to write at the same level of his thinking and his perceptions of the level of his peers. Expressing his frustrations, he became verbally disruptive, then withdrew from classroom activities and from friends. Because of his high academic ability, modifying the length or difficulty of his assignments seemed to rob him of self-esteem hindering him in expressing the intelligence he did have.

Written language learning disability is specifically the inability, with a writing tool in hand, to write on paper the thoughts the student is thinking in the same form as the thoughts are being experienced (i.e. same grammar, word choice, fluency and content). Each thought seems to get "mixed up" in the journey from the brain, to the hand. The written result is usually immature, illegible and incomplete.

The requirement of handwritten assignments began to cause problems for Chris and his teacher that outweighed any educational value the assignments were worth. As a team, his general classroom teacher, his parents, and I discussed alternatives. The computer seemed an obvious choice. Chris had had keyboarding instruction over the past several years and usually enjoyed using the computer in his current classroom. Chris' coordination and ability to manipulate the keyboard appeared to be considerably more skillful, than when he used a pencil. I assessed his typing ability to assure the team he could type at least at the same rate, if not faster, than he could write by hand. Because he could type as fast as he could write, the team agreed that Chris would be provided access to the computer to complete all written language assignments (reports, spelling tests, language assignments, letter writing, etc.) on the classroom computer. Sixth grade assignments require lengthy written reports, in addition to various other written language assignments, to be worked on at school and at home. With access limited to a computer only at school, we were concerned about the student's ability to keep up. Using resources allocated by the school, I found a portable, battery operated, laptop computer called the Alpha-Smart Pro, which can be used both at school and home by a student. The Alpha-Smart Pro became Chris' personal tool for the school year, to be used for any assignment for which the student or teacher felt a need.

The Alpha-Smart Pro is compatible with Macintosh computers available in the classrooms. The Alpha-Smart Pro is plugged into the Macintosh computer, the document he was working on appears, ready to be edited or printed as any document on whatever available software the computer uses. In this school, we used the Clarisworks program. The Alpha-Smart Pro provision was included in the student's IEP and implemented immediately. As the number of assignments Chris completed and turned in increased, I became interested in his perception of himself as a writer with this tool.

Chris used the Alpha-Smart for approximately a month when the regular education teacher came to me to discuss providing another Alpha-Smart for a female student, Mary. Mary was a student who was in the same class as Chris. Mary also had a written language learning disability. Her teacher informed me that Mary, who usually did not struggle, was having a hard time writing out assignments. Because we had started to see positive results with Chris' use of the Alpha-Smart in regard to increased legibility of assignments and more assignments turned in, we thought we would try the Alpha-Smart with Mary.

Both students were excited about the Alpha-Smart and each brought a bag from home to use in carrying it to and from school. As the special education teacher, I observed and noted in the students' files the progress being made as the Alpha-Smart usage increased. It was at this time that I began searching for a topic to study for a thesis.

The study eventually focused on and became a qualitative, descriptive study of two written language learning disabled students' perceptions of themselves as writers who are able to use the Alpha-Smart Pro personal laptop computer. This study sought to describe the perceptions of the participants through information gathered and reflected upon in a Q-sort, observations, interviews, and work samples. This study will interest professionals who work with students who are learning-disabled in the area of writing or professionals interested in incorporating the personal laptop into the classroom for writing assignments. This study will be of interest to such people who are interested in further understanding students and their own perceptions because knowing this will allow for more individualized instruction of a student.

Understanding how the student perceives him or her self as a writer could allow for the teacher to teach the student at two levels, one of which is at their academic

instructional level and the other is at the level they perceive themselves to be. As a special education teacher I use a variety of measures to determine where the student is at academically; what skills they have, what strategies they don't have and what their strengths and weaknesses are in the areas of academics. When I understand their current placement I feel ready to plan out instruction for each student. If, in addition to determining their instructional level, teachers could and would determine each students perceptual level, then instruction may be able to be even more individualized and effective. Knowing how a student perceives their writing, for example, will allow each teacher the ability to appreciate the students' capabilities and intentions. For example, a teacher may change her instructional planning if a sixth grade written language learning disabled student is assessed as writing at a third grade level and the student perceives himself to be a good writer with a lot of strategies to use in helping himself. I think the plans for the student in that example would be more mature or more challenging than the plans for a student who is a sixth grader writing at a third grade level who perceives himself to be a poor writer without a lot of strategies. For the purpose then of providing appropriate instruction to children of various academic *and* perceptual levels, I believe it is important to understand how students in this study perceive themselves as writers.

Statement of the Problem

Through a review of the literature, I became aware of two points that clarify a need to study the perceptions of students of themselves as writers: the positive effects the computer has on some mechanical aspects of writing, and the need to understand how students perceive themselves in a specific academic area.

I will begin with the first point regarding computers and the student. As the amount of technology in the classrooms has increased over the years so has the amount of research on how technologies impact learning and performance. Studies have been

done that reported how the computer positively affected "fluency as well as syntactic and mechanical skills of the writers" (Newcomer & Barenbaum, 1991). Later studies, like the one done from 1984 to 1986 by the United States Office of Special Education Programs, determined that the computer usage increased the number of words used in a written language assignment. Additionally, the research they did revealed that computers improved the "vocabulary, complete thoughts and complexities of sentences"(Morocco & Neuman, 1987). In a study with a focus on special education, The National Center to Improve Practice in social education through technology media and materials (NCIP) stated that the computer was useful for students with a written language learning disability in keeping up with their grade level peers. Morocco and Neuman (1987) further suggested that students have access to a computer as all times since this supports academic improvement. Through the review of literature on computer usage and learning, I found that it is understood in the education field that computers positively affect the mechanical aspects of writing such as length, editing, syntax, and the ability to keep up with peers (McAllister & Louth, 1989; Coley, 1997; Gradgenett, Lloyd & Hill, 1990-1; Woodward, 1992; Rockman, 1993; MacArthur, 1996; and Kurth & Stromberg, 1994). What has been studied less adequately is how the written language learning disabled students perceive themselves as writers when they are able to use computers to complete written language assignments. Understasnding of how students perceive themselves as writers will better allow for more specifically tailored and individually designed leasson plans, which is the goal of many special education programs.

The second point I discovered in my literature review dealt with self-perceptions as students of learning disabled students. Studies of learning disabled students self-perceptions as overall students indicated that the self-perceptions of learning disabled

students are lower than that of their non-learning disabled peers (Chapman, 1988; Bandura, 1992; Covington, 1984; Rogers & Sakolofske, 1985). These research studies also report that self-perceptions as students are directly linked to motivation and achievement. The effects of a lower self-perceptions as students impact the students academic performance negatively (Heyman,1990;Rogers & Sakolofske, 1985). The studies done to establish the link between self-perceptions as students and motivation and achievement gathered their data by comparing LD students to non-LD students. What is missing from the research are studies revealing the self-perceptions as students of LD students who are not compared to non-LD students.

Research on self-perceptions that has been done in the past was conducted on self-perceptions of children as overall students. The LD students were asked to compare themselves as students in general to non-LD students. What was found less often in the research was information about the self-perceptions of LD students in specific academic areas such as writing.

After completing the literature review of the two points, computers and learning and the perceptions of students, I determined to study the self-perceptions as writers of two written language learning disabled students who are able to use the Alpha-Smart Pro Personal laptop computer. Students with learning disabilities perceive themselves to perform at a lower level than their peers, academically. Knowing this, I felt that there was a need to determine what these two students perceived about themselves in a domain specific study, namely writing.

Purpose of the Study

The purpose of this research was to describe the self-perceptions as writers of the participants, two written language learning disabled students, who were provided a personal Alpha-Smart Pro computer. This study was designed to provide insight for

teachers and administrators with the responsibility to educate written language learning disabled students and can choose tools to teach them with. The insight gives them a better understanding of the person they are teaching, which in turn allows them to provide more individually tailored instruction. In addition, understanding what role, if any, technology plays in the student's self-perceptions as writers may give more support for the use of technology for students with learning disabilities.

The Grand Tour Question

Initially, I decided to investigate the following question: What are the self-perceptions as writers of written language learning disabled students who are using the Alpha-Smart Pro personal computer for written language assignments?

During and after data collection I realized that the Alpha-Smart, although used often, was rarely mentioned by the participants. Also, the Alpha-Smart was not a required tool, but was a voluntary, available tool that the students were allowed to use. As a result of these considerations, I changed the question to be a more accurate reflection of the role of the Alpha-Smart: What are the self-perceptions as writers of written language learning disabled students who are able to use the Personal Alpha-Smart Pro computer for written language assignments?

Delimitations and Limitations

A delimitation is used to "address how the study will be limited in scope" (Creswell, 1994). This research study was limited to a study including observations, interviews, a Q-Sort, and written work samples of two sixth-grade students in a Midwest public elementary school.

A limitation identifies a "potential weakness of the study" (Creswell, 1994). The topic of study I chose came directly from pre-existing circumstances involving two students at the school where I taught. The discoveries in this study could be different

for different participants. Therefore, the method of subject selection used in this study decreased the ability to generalize findings and was a limitation of the study.

In this study I was the primary filter through which all data collected was filtered. This role as researcher and as the students' special education teacher further limited the generalizability of this study. My personal connection to the participants was a potential source of personal bias in the data analysis phase. I took several steps to limit this bias interference. Triangulation of data sources helped to support my analysis of data with multiple sources of data collection (Merriam, 1988). I also had a debriefer who was responsible for reading the data sources used in developing discoveries. Once she read the data she explained to me her interpretation of the it. We discussed similarities and differences in our discoveries and we each justified them to each other. Thus, she verified in her opinion, that the discoveries were valid, considering the collected data.

Time was a limiting factor in this study. This thesis was written while I, the researcher participated in a one-year graduate degree program. During the year-long program I taught full-time at a local, public elementary school, I attended full-time graduate classes and conducted this thesis. The program was designed with the intention of having the research be completed and the study be written with in the 12 month program.

My professional experience as a teacher and as a researcher may be interpreted by the reader to have been a limitation in this study. I completed my first year of teaching at the same time as I conducted this study. Prior to this school year I worked as a student-teacher and as a volunteer in schools for several years as I earned my undergraduate degree. As a researcher, my experience is more limited. I studied research in one graduate level course work at the start of this research study. The majority of my research training and experience came as I collected data and developed the study. My

thesis chairperson devoted much time to teaching about the research process throughout the year.

Significance of the Study

Understanding the perceptions of the participants who were able to use the Alpha-Smart Pro computer on their written assignments will help assist in developing more individualized teaching practices for special education students with learning disabilities in written language. For example, a teacher teaching a student with positive self-perceptions may be able to teach using more age-appropriate materials that challenge and stimulate the student at the same grade level at which they are. However, if a teacher is teaching a student who has negative self-perceptions despite higher academic skills, the teacher may choose instructioanl materials with which to instruct that are closer to the level of the students self-perceptions. By understanding the students academic level and the students self-perception level the instruction given to each student will be more specific and individualized.

The discoveries of this study will assist in making decisions as to whether the Alpha-Smart Pro would be a benefit to a student or a school system. Knowing from past research that computers positively impact the mechanics of writing of LD students, then if students perceive the Alpha-Smart Pro to be a positive influence on their writing ability schools may, using these two points of interest, decide to provide such technology to similar students. The results of this study may provide useful information for additional research in the area of written language learning disabled students and the use of technology, specifically the Alpha-Smart Pro personal computer.

Rationale for a Qualitative Design

To justify the rationale for a qualitative design I will use the assumptions of a qualitative design as given by Merriam (1988). The first assumption is that qualitative

research is interested in the meaning of how people structure their lives and make sense of their world. This study reflected this assumption as I attempted to understand the meaning behind the behaviors, comments and actions observed. In addition, I sought directly, the meaning the participants felt, through interviews. I attempted to use multiple sources of data to support one common theme that painted a picture of the meaning behind the students' observable behavior and words. A second assumption given by Merriam (1988) states that the researcher is the primary instrument for the collection and analysis of data. In this study, I served as the primary instrument who collected and analyzed the collected data. Another assumption is that qualitative research involves fieldwork. To accomplish this the researcher goes into the setting of the participants to observe. I conducted this study and the collection of data in the participants' natural setting, their classroom. A fourth assumption is that qualitative research is descriptive. This requires I report the data using words or pictures rather than numbers as is the case in quantitative research. Because of these six assumptions I felt qualitative research best allowed me to answer the question of this study.

Type of Design Used

This study was descriptive, a report of data collected by a variety of sources in a narrative design (Creswell 1994). The reporting of data was in the form of words and pictures (Bogden and Biklen, 1982). The reporting of data was detailed and thorough with the assumption that all observed behavior and collected data is useful in the research process.

The Role of the Researcher

My role as researcher began after I was assigned to be the special education teacher at the school where I conducted the study. At the research site, the school and classroom, I regularly observed the students as I was in their classroom daily. My role

was not disruptive, since my presence in the classroom was as regular before the onset of the study. I was in the classroom daily before and during the data collection. I was in the classroom approximately 30 minutes each visit.

Researcher Perspective

Because I was the primary filter for the information gathered in this study I believe it is important that the reader understand my perspective of what writing includes and my philosophy of how written language learning disabled students learn to write. I view writing as a process of communicating creativity, ideas, emotions and adventures that can be shared with others because of its written form. I believe that writing includes two components; process and mechanics. Process is brainstorming, rough drafts, editing, revising, peer conferencing, public sharing of drafts, final drafts and publishing. Mechanics includes organization, metaphors, similes, grammar, symantics, syntax, vocabulary and word choice.

My philosophy of how written language learning disabled students learn to write includes opportunities for repeated practice and hands-on learning. By this I mean that the learning disabled student needs to be verbally told what they will be learning and then provided repeated guided practice opportunities. Following guided practice an opportunity for independent practice should be provided. This practice should be monitored by peers and teachers who both are responsible for positive feedback and constructive criticism. An important aspect of learning to write is self-correction of written work. I have found it to be powerful for students to be responsible for improving their work and discussing the strengths and weaknesses. Following repeated revisions the student along with the teacher and peers determine when the paper has reached final draft status. In order to determine that the piece has reached final draft

status the students must have been exposed to other works by various authors that have been determined to be of final draft status.

According to my philosophy of learning to write, an important aspect of writing is reading other written pieces. Exposure to other authors writing opens up the students to the many possible ways he or she can use writing. Students should be exposed to writing styles such as historical writing, textbooks, creative writing, fiction, non-fiction, poetry, journal writing and newspaper articles.

The method of teaching writing that is described above applies to all students despite ability levels. The difference for students with written language learning disabilities occurs at the physical writing stage. Writing to me is not limited to paper and pencil or pen. Because writing can be frustrating for students with such a disability because of the difference in their potential achievement and what they actually create using a pen or pencil, I believe the removal of the barrier, the pen or pencil, could alleviate some of the frustrations. Writing therefore includes using a computer, verbal dictation into a recorder or to a peer writer, or drawing of pictures to illustrate an oral story.

Gaining Access

I already had access to the students' past and current academic information since I was their special education teacher during the school year of this study. To conduct the study I acquired permission from the school principal, the school district's assistant superintendent of curriculum, the students' parents and the institutional review board (IRB). To obtain the written permission from the parents I assured them that the results of the data collection and analysis would be recorded anonymously. To report the findings about the student I wanted them to have names so as to keep the feel of the study personal in nature. To do this I asked each student to choose a name they would

like to be referred to in the paper. The female participant chose the name Mary and the male participant chose the name Chris.

Method of Subject Selection

The participants were first provided their Alpha-Smart Pro computer at the beginning of the school year, prior to knowing I would be starting this study. Since this was the first time, at this school, students were given all day (school and home) access to the Alpha-Smart Pro, questions arose for me as to what the slef-perceptions as writers would be of the students who were using this tool. The two participants in this study were the only two sixth-grade students with written language learning disabilities and the only two to be given full-time access to the Alpha-Smart. Although there were other WLLD students at other grade levels I felt the amount of keyboarding experience each participant had was essential to providing the Alpha-Smart to them and selecting them as participants. At the sixth-grade level all students at the school site in this study had received three years of keyboarding instruction, during grades three, four, and five. This was true of the female participant. She had attended the school site of this study since the third grade. Keyboarding instruction was provided three days a week, 20 minutes a day, for three years. The male student to whom I first provided the Alpha-Smart Pro, was a transfer student from out of state. It was established that he had received similar training at his former school for a comparable amount of time. There is only one sixth-grade class at the study site, which narrowed my selection to the two students who participated in the study.

Definitions

Qualitative Study.

Qualitative research methods allowed me to observe the participants in their natural setting while collecting data. According to Creswell (1994), qualitative research

aims to be "an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting". The analysis of data in a qualitative study required that I, as the main instrument in filtering the data collected, look for repeating themes or topics to report on. The reporting of the data would then be described with words rather than report with numbers (Creswell, 1994).

Descriptive.

Descriptive refers to the kind of reporting of data done in this study. I reported the discoveries I found with words in a descriptive design. This design is different from other ways which report with numbers or statistics. This method, since it allowed me to describe using words, gave a voice to the students being studied. This voice allowed for self-perceptions to be reported in the words of the child. The studies reviewed in the literature review traditionally used a quantitative measure to compare students to others or to a given standard. Qualitative design allowed me to reveal information and self-perceptions from and about the child through him or her self.

In the data collection process of this qualitative descriptive study I was looking for information relevant to my grand tour question while remaining open to other information. An important aspect of data collection and analysis is the respect given to the data. "The qualitative research approach demands that the world be approached with the assumption that nothing is trivial, that everything has the potential of being a clue which might unlock a more comprehensible understanding of what is being studied" (Bogden & Biklen, 1982,p.28). Bogden and Biklen further explained that a qualitative research study may develop focus as the data is collected. The study begins with specific questions however, hypotheses are not formed as in quantitative research. The descriptive reporting of the data included specific quotations from the data collection for

use in reporting with accuracy from observations, interviews and written work (Bogden and Biklen, 1982).

Self-Perception as Writer.

The opinions the participants hold about themselves as a writer.

Self-Perception as Student

The opinions the participants hold about themselves as overall students.

Written Language Learning Disabled.

Those students verified according to Rule 51, Nebraska's guidelines for Special Education, as having specific learning disabilities in the area of written language(Appendix E). Learning disabled is defined as a student having an intelligence score of average or above average, yet because of a learning disability, the student is not performing at the individual's potential in a specific academic area.

Alpha-Smart Pro.

A laptop style personal, portable keyboard that is used for typing, editing and storing written information. The keyboard is used at the students' desks or at home, and can be hooked up to the main Macintosh computer to be downloaded, edited or revised, and then printed.

Written Assignments.

Those assignments that were assessed by the general classroom teacher or the special education teacher that were assigned and graded for ideas, content, fluency, order, comprehension of topic being written about, and creativity. These assignments were not graded for handwriting.

Chapter 2: Literature Review

The following literature review is a representative sample of the articles and studies available on two issues, first, computer usage in classrooms with students, both special and general education, and second, self-perceptions as students of special education students. The literature review framed as summaries includes: who conducted the study, the purposes, the methods, and results, as well as summaries of reports from various educational agencies.

The review will paint the picture of a solid body of research available on the positive impact of computers on learning disabled students' writing. What becomes apparent in the review is a need to hear the self-perceptions *as writers* of the students on whom the research has been conducted. Understanding the self-perceptions as writers of learning disabled students will assist the teacher in developing even more individually specific lesson and educational plans.

Computer Use in the Classrooms

Since technology has been integrated into the elementary classroom, numerous studies show the effects of the computer has on learning. Study topics ranged from "Can learning disabled (LD) students learn to use the computer?" to "How does the computer impact LD students writing?". All of the studies I found were researched quantitatively and, therefore, reported results with numbers.

Seeking to determine strengths and weaknesses of LD writers as well as to find out if LD students can learn and how they learn the skills necessary to use a word processor, the United States Office of Special Education Programs provided funds to the Education Development Center, Inc. to conduct classroom-based studies of the use of word processors and learning-disabled (LD) students (Morocco & Neuman, 1987).

Further, they sought to discover the word processor's impact on the writing abilities of students, how teachers approach the topic of teaching word processing skills and what it is specifically about the word processor that can assist effective-writing instruction for LD students. The investigators gathered data from various sources. They obtained teacher ratings of students cognitive ability, socio-emotional status and motor skills. They collected student Individual Education Plans (IEP) for standardized assessment scores in related areas. Additionally, they collected writing samples that were prompted and assessed using procedures outlined by the National Assessment of Educational Progress (NAEP) and the Educational Testing Service. The investigators collected three samples of writing in the fall and three in the spring. The samples were analyzed for number of words, vocabulary, both unique and mature, complexity of sentences, and T-units (number of complete thoughts) (Morocco & Neuman, 1987). To support the data collected, each week they conducted observations while the students were writing.

The results of the study reported that LD students' strengths and weaknesses as writers span a wide range of lower to higher-level ability. Recall of information, oral expression of ideas, generation of ideas, organization, fluency, spelling and motivation were the strengths of some students, the weaknesses of others. Some participants could attend to a writing task for a long span of time yet produce little content. At the same time, others generated ideas and content but did not attend to the writing task long enough to complete the work. These collected data led the investigators to conclude that the different student abilities make it difficult for teachers to work successfully with the students.

The study completed case-study diagnostics that compared the differences in strengths and weaknesses of several students. After reviewing the data, the researchers

drew several conclusions. They concluded that most LD students given proper instruction *can* learn to use the word processor, and students with the poorest motor control need to learn to use the word processor as a tool more than those with less control. They found, in order to meet the various student needs that procedural, how-to-instruction works most effectively (Morocco & Neuman, 1987). Using the procedural approach instead of a substantive technique produced more powerful results in terms of numbers of words typed, and their improved sense of ownership of their work (Morocco & Neuman, 1987). In summary, they concluded that the results confirmed their assumptions, there is a need to combine the LD child, the teacher and the computer to produce effective results and capable writers.

The fact that there was a need to conduct a study on whether or not LD students could learn to use word-processing skills shows how far technology has come in terms of the variety of learning abilities it can help. Today, schools are looking ahead at the ways technology can help learning, as opposed to *if* technology can help. This study provides a foundation to launch the rest of the studies on how computers assist the LD student.

As the issue, computers and the learning disabled student, evolved over the years the computer began to be viewed as a means of assisting mainstream students. The National Center to Improve Practice in Special Education through technology, media and materials (NCIP), established that computers are successful in helping LD children keep up in mainstream education courses(NCIP, 1994a). The portable laptop computer can provide students with disabilities access to writing in many settings. The portable laptop can provide this access "round-the-clock"(p.2). This implies that a student can use this technology at various places, at school as well as at home. In addition, the

report states a child dependent on the tool to communicate successfully should have access to the tool at all times.

Also in 1994, The National Center for Improved Practice of special education through technology, media, and materials released information (1994b) that stated that using various modes of technology, including personal computers, "perhaps most importantly, can ease the transition from concepts to words"(p.1). By definition (Rule 51), the LD student struggles when communicating with pen or pencil and paper, though conceptualizing at an average or above-average level (Nebraska Department of Education, Rule 51). Therefore, if the student can conceive the idea and make it a reality on the computer, educators should support this and not always require the use of pen or pencil.

One of the earlier studies on basic writers and how the word processor assists such students indicated that the word processor allows for more frequent and accurate revisions. In a quantitative study, McAllister and Louth (1989) studied the effects the word processor had on the quantity of revisions a writer uses as opposed to the paper and pencil method. "The results indicated that word processing does have a positive effect on the quality of revision in basic writers"(p.2). McAllister and Louth also found significant improvements in the number of revisions as well as a smaller number of errors in papers revised by word processor in contrast to those done with paper and pencil.

The study was executed by exposing all potential participants to keyboarding instruction and then creating two experimental groups and one control group. These three groups were then exposed to various software programs involved in writing products. Group one participants spent two of five classes per week solely revising and writing their papers. Group two did not attend this class for writing and revising, instead attended an additional (to its five-day-per-week-class) course once a week on revision and writing. The control group did not attend these additional courses. Various

prompts were given to the groups at different times throughout the semester. Graduate students then were asked to apply a holistic rubric to score the narrative writings that resulted from the prompts. Each paper was scored three times by different people so as to validate or invalidate each others findings. The revisions by the two groups with the additional courses or course showed significant improvement. The investigator attributed this to the use of the word processor. The report indicated that past research shows the *environment* of a writing workshop area motivated the writer as well as *instruction* in using the computer to revise a paper (McAllister & Louth (citing Ronald Sudol), 1985).

In an effort to gather further understanding of the process of this study as well as a time line, by telephone I contacted Louth, one of the co-authors of the study. He seemed excited to discuss with me how the field of research on computers and LD students has grown since his study was completed. He recalled that at the time of his research there was very little previous research conducted on basic or remedial writers. He was pleased, for LD students, that today the classrooms are now using the computers with all students instead.

An attempt to compare the writing of LD students using a computer versus handwriting yielded results indicating that using the computer alone is not successful with LD students (Grandgenett, Lloyd, & Hill, 1990-1991). Instead, what is needed for success is a technique of combining organized instruction with access to a computer for writing. Grandgenett, et al.,(1990-1991), conducted a quantitative study, the purpose of which was to describe the effects found from comparing children's writing done on the word processor to that of work done with paper and pencil. The children were assigned at random to be in the experimental group (word processor), or the control group (paper and pencil). T-units and minimal sentences were used to analyze the quality of the

writing. The data collected were T-units, words in T-units and gross words. Significant improvement was found in both groups (Grandgenett, et al., 1990-1991). These results caused the researchers to conclude that the carefully planned writing instruction, which both groups received, was as instrumental in improving the writing of the students as was the word processor itself. Using a thoughtful combination of both instruction and computer usage was suggested as the best method, according to this study.

Similar research results were released soon after the Grandgenett, Lloyd and Hill study (1990-1991). Woodward (1992), in a three-year study, set out to identify emerging trends and themes in technology in Special Education. He discusses the issue of implementation along with teacher instruction to make the computer a useful tool and not a time or space filler. The implementation of computers into the classroom has changed drastically in the 10 years since Bork (cited in Woodward, 1992) said:

> "We are at the onset of a major revolution in education, a revolution unparalleled since the invention of the printing press. The computer will be the instrument of this revolution. While we are at the very beginning--the computer as a learning device in current classes is, compared with all other learning modes, almost nonexistent--the pace will pick up rapidly over the next 15 years. By the year 2000, the major way of learning at all levels and in subject areas, will be through the interactive use of computers" (p.7).

In 1983, schools had relatively few computers when compared to total school enrollment (Woodward, 1992). In 1990, it was reported that the average school had 45 computers, up from 21 in 1985 (Woodward, 1992). Woodward (1992), suggested the numbers of computers had increased but the amount of time using them had not. In 1987, Becker and Sterling reported that special education students had reached the point

where they spent an equal amount of time on the computer as did general education students (Woodward, 1992). A key point mentioned in the article by Woodward was the older age of the computers with which the past research was done. In addition, most computer programs only required drill and practice (p.9). Woodward suggested investigating further the effects of word processing on application of word processor abilities with children to supplement research done on drill and practice. In conclusion, Woodward's report suggested simply putting computers into the classroom was not the answer, instead, the report recommended a combination of skillful instruction and the use of the computer together. Lastly, it was suggested in that study as schools become more accustomed to teaching with the word processor, it would be interesting to discover the extent to which practice assists low achieving students. This will be an important question, Woodward asserted.

Technology became more respected as a permanent fixture in schools as studies repeatedly reported the positive aspects. As was explained in the study by Coley (1997), computers can and should be provided the opportunity to provide more than word processing skills. Coley discussed the benefits of using school technology. He said that computer based instruction can individualize instruction, give instant feedback to students, explain answers, provide infinite patience and be non-judgmental. Coley paraphrased Kulik by saying that over 10 years of research done by eight teams revealed that more learning was done in less time when the instruction they received was computer-based (1997). In addition to the amount of learning, Software Publishers Association released in its report, of 176 studies from 1990-1995, that "technology-rich"(p.A30) classrooms allowed for positive effects on "all major subject areas" (p.A30) for all ability students preschool through college (Coley, 1997). Numerous studies have demonstrated that "technology is particularly valuable in improving student writing"

(Coley, 1997, p.A31). It was also noted that "students were more challenged, more engaged and more independent" (Coley, 1997, p.A31).

In an effort to gather support for computer-based instruction for special education students, the following report tells of the creation of a special course offered for reluctant writers. The purpose of the course and its results are testify to the power the computer has on those who otherwise may not have been practicing writers.

Two teachers, Maura Stumpf and Evangela Pavloglou, at Wayland Middle School in Wayland, Massachusetts and two expert researchers, Judy Storeygard and Rebecca Simmons (1993), studied the impact of a special education class for reluctant writers, titled "Computers and Writing"(Storeygard, Simmons, Stumpf, & Pavloglou, 1993). The course was offered to students who qualified for special education; students who struggled with topic generation, handwriting, poor spelling, organization and sequencing troubles. After focusing the class instruction on keyboarding and spelling they began short writing assignments. The researchers observed anxiety in the students caused from written assignments in their mainstream course work. Mainstream work then became the primary focus of the course. The teachers used prewriting software, techniques using the editing functions of the computer, breaking down the assignments into manageable parts as simply providing time to work, all as means to assist the struggling writers. The results of the study showed that the computer assisted the students in many ways. Students found it easier to revise or "change" the text by rearranging the words electronically rather than erasing with paper and pencil. One student said, "it's (my thought) on the computer as soon as I say it. And with my writing, or my handwriting, I'm thinking something, I'm writing down, and my mind is over here and my hand is over here still writing what I thought here. And then I forget this; when I get here I stop dead" (p.23).

The results of this research also showed in addition to facilitating written assignments, the computer helped students to express their emotions (Storeygard, et al., 1993). According to the researchers, producing legible work improved student motivation for writing. Using the spell checker allowed the students to write thoughts now and edit later. In conclusion, the researchers stated that the course Computers and Writing not only enabled reluctant writers to improve their writing skills significantly, but also facilitated their participation in mainstream learning" (p.24).

In an attempt to understand how to alleviate the burden of poor study skills that LD students have, a study was conducted with secondary students (Anderson-Inman, Knox-Quinn, & Horney, 1996). The researchers studied the effects of technology and its support of study strategies. The students were given laptop computers to use while being taught "computer based study strategies" (p.461). According to this study, learning disabled students' strengths are not usually study strategies. Anderson-Inman et al. discussed the LD students' inability to understand what is expected of them when given an assignment. According to the study's researchers, the students also failed to understand how to integrate what they already knew about a topic with what they were learning so as to attach meaning to it. With that in mind and the hope of relieving confusion from that student, the purpose of this study was to see the effect the computer-based instruction would have on these study habits of struggling writers. The researchers used interviews to gather data to answer their questions. The results indicated that the students learned the strategies at different levels. One group, Power Users, was skilled and independent. Another group, Prompted Users, was skilled but less independent and required prompting. The last group, Reluctant Users, worked only with supervision and seemed to understand less. The recommendation that emerged from this study was to provide keyboarding skills for students who would be using the

computer. This recommendation resulted from the finding of that study: The higher the level of keyboard understanding the higher level of acquisition of study strategies.

In another study with the determination to reveal the positive impacts the computer can have on learning, MacArthur, Ph.D., an associate professor in the Department of Educational Studies at the University of Delaware, authored an article for the purpose of "reviewing specific ways, founded in research, that the computer can support the writing processes and enhance writing instruction for students with LD" (1996). He stated that it was essential to provide such a tool for LD students because they struggle with the motor skills and cognitive processes necessary to write with pen and paper (MacArthur, 1996). MacArthur believed that the word processor offered abilities that will be helpful to LD students. These abilities are the ease of revisions, ability to produce neat, legible works, to see clearly typed text on the monitor, and finally the ease of typing versus the difficulty for these students with handwriting. MacArthur reported there was inconclusive and limited research available on LD students and the use of the word processor. Over all, he felt the computer was a benefit to students and should be incorporated into their curriculum as the pencil is for general education students.

With the current thesis project in mind, I found an article that was interesting to review because it combined the factors of motivation and computer usage. Kurth and Stromberg discussed revision on the word processor. They discussed how Collier implemented a computer into a classroom study that was difficult to understand and manipulate. The students did not enjoy working with it. In another study the researchers discussed that when the word processor was easier to manipulate, the students' motivation to use it improved. In both cases the writing quality did not improve, but the level of interest in using the computer changed.

The information in this literature review gives a clear message that computers have been determined to assist the learning of the LD child. First, it was determined that LD students do have the ability to learn the skills needed to use the computer for writing purposes(Morocco & Neuman 1987). Several reports declared that the computer offered advantages that allowed the student to be successful. The NCIP stated that full-time access to laptop computers would give mainstream students the opportunity to keep up with their peers (NCIP 1994a). The computer can make it easier for students who struggle with forming words on paper from concepts (NCIP, 1994b). According to a partnership of researchers, the word processor capabilities of the computer make revisions, a common problem area in writing, easier (McAllister & Louth, 1989). Two studies provided similar findings (Grandgenett et al, 1990-1991, and Woodward, 1992). These two studies provided results that suggest the combination of careful instruction with computer usage in order to make writing more success for the LD students. Coley provides more specific ways the computer can positively impact learning (1997). He suggested that the computer can provide a form of individualized instruction, give immediate feedback, explain responses as well as show eternal patience and not pass judgment on the students or his performance.

In a real-life classroom setting a special course offered students an opportunity to use computers to develop their writing. The students reported that the computer provided a way to keep ideas straight and it was faster for them to type and keep with their ideas as opposed to a slower method like the pencil in which ideas can got lost and confused (Stumpf et al 1993). According to Anderson-Inman, Ph.D., computers can help LD students improve study skills, generally a weakness for them (1996). By providing guided instruction the students were able to show a growth in study skills at different levels. The results indicated those who had more keyboarding practice

performed better on the administered items than those with less keyboarding experience (Anderson-Inman, Ph.D et al,. 1996). MacArthur Ph.D., asserted that it is essential to provide access to the computer to allow students to reap technologies benefits. He suggested the computer can ease revisions, help provide neat, legible writing, see finished project on screen while working, alleviate the difficult task of handwriting and allow for a simpler modality, typing (MacArthur 1996). In the final report, Kurth and Stromberg, presented a paper to the American Reading Forum that stated students were more interested in using a computer that provided ease in the use of it. Those computers that were difficult and tedious to use were not utilized like the ones with easy operating instructions (Kurth & Stromberg, 1994).

What is evidenced by this review of the sample of literature is that computers have been established as a definite tool of success in the classroom with LD children in the academic area of writing. What is not clear is what the students feel about the writing portion of their educational experience and what they perceive to be the influence, if any, of the computer on their writing.

Self-Perceptions as Writer

The literature review produced studies that had indeed researched the self-perceptions as students. The focus of the studies discussed in the literature review dealt with how the students perceived themselves to be as overall academic students with respect to all academic areas. The area of lesser research was in that of domain specific studies, in this study, namely writing. In the present study when I refered to self-perceptions of the students I investigated I will do so as self-perceptions as writers. This difference in teminaology is to shoe the distinction between the past studies investigation of the overall student and this studies more specific focus of the students as writers.

Self-perception or self-concept, is described as the self-perception involving how we feel about our abilities and acceptance by social peers (Byrne, 1984; Chapman, 1988). Positive and negative self-perceptions have been determined to be direct influences on learning (Chapman, 1988; Schreirer & Kraut, 1979;Wylie, 1979). Students who have a positive self-perceptions as students are more likely to attend to a task longer even when it is difficult, than students with lower self-perceptions as students. Those students who hold a lower self-perception as students are more likely to quit or try a difficult task for a shorter amount of time (Bandura, 1992; Covington, 1984; Chapman, 1988).

The following review of the literature focuses on studies of LD students' self-perceptions as students. I will explain self-perceptions as students and how they have come to be regarded as a direct influence on the achievement of LD students. The literature review unveiled the powerful impact self-perceptions have on learning.

The participants in the studies I reviewed were measured using standardized tests and compared to either non-learning disabled or a set criterion. The present study does not attempt to compare the participants to anyone else but rather seeks to uncover what the student's self-perceptions are in relationship only to him or herself. The studies I reviewed were measuring the *overall* self-perceptions of the participants as students. For this study I will review the studies and their results so as to help the reader see that the knowledge that exists will be furthered with the present study's efforts to determine specific students' self-perceptions in the specific academic area: writing.

Rogers and Saklofske (1985) conducted a study that supports data they collected in their literature review. The quantitative study had 90 seven to nine year old subjects. Half of the students were verified LD and the other half were termed "normal achievers".

The study investigated the affective variables of the students through the use of measurement scales: the Piers-Harris Children's Self-Concept Scale, Student's Perception of Ability Scale, Nowicki-Strickland Locus of Control Scale for Children, Intellectual Achievement Responsibility Questionnaire, and the Projected Academic Performance Scale. Three testing administrations occurred with modification made to assist the LD students. Teachers also completed scales after the student data were collected.

Their findings added to the quantitative body of knowledge that existed at the time of the study (Rogers & Saklofske, 1985). As of 1985, research in the area of affective characteristics had been slow (Rogers & Saklofske, 1985). This was despite the fact that "Authorities in the field of learning disabilities have long granted importance to the affective characteristics of learning disabled children, and a host of negative affective characteristics have been attributed to them" (Rogers & Saklofske, 1985). According to a study by Rogers, MEd and Saklofske, Ph.D. "there is a body of research comparing learning disabled children and normal achievers on measures of self-concept...the overall base of knowledge in the area is lacking and inconclusive, particularly as it relates to subgroups of learning disabled children" (Rogers & Saklofske, 1985). What was conclusive however was that learning disabled children have a lower self-concept than non-learning disabled children. As a point of clarification, the difference between the self-concept of LD and non-LD students were significant in the area of academics more so than in the area of general self-concept.

In addition to the low self-concepts the students held at the time of the study done by Rogers and Saklofske, the researchers stated that "learning disabled children have lower expectations for future performance than normal achievers" (Chapman et al, 1979; Dunn, Pearl & Bryan, 1981). The researchers in this study were unable to

determine which caused which factor in the cycle. Did the learning disability cause the low self-perceptions or did the low-self-perceptions cause the LD?

It was suggested in this study that special education teachers should pay attention to affective characteristics of the learning disabled student. Doing this will assist in developing and implementing special education lesson plans.

The plan to include an assessment of self-concept with academic assessment is not new. Black (1974), suggested the same plan of action: "The implications of these findings are apparent. Children with deficient performance on achievement testing tend to perform in a manner suggesting a more negative view toward self than do similar children with adequate achievement test performance. As children tend to view their personal worth and adequacy in part by the apparent adequacy of their school performance, an effort should be made to deal with both the learning problem and problems in self-concept in any remedial programs" (Black, 1974).

Black's (1974) study hypothesized that self-concept would correspond negatively to the level of retardation-impacted achievement and would correspond positively when related to intelligence. His subjects were all at risk of failing one or more subjects. Of the 50 students he studied, 25 were verified retarded readers and 25 were not. Black administered the Children's Self Concept Test and found that self-concept and under-achievement were inversely related. This translates to increasing under-achievement that is associated with an increasingly poor self-concept (Black, 1974).

Several studies attempted to determine the impact of self-perceptions on achievement (Renick & Harter, 1989; Heyman, 1990; Priel & Leshman, 1990; Grolick & Ryan, 1990). In Renick and Harter's (1983) study on "Social Comparisons on the Developing Self-Perceptions of Learning Disabled Students", a component to be

considered when assessing student self-perceptions is given: Harter says contradictory results of studies of participants who are between middle school and adolescence may be caused by the emerging need to compare the self to others during this period of human development. It seems, from these studies, that students who are part of this age group are becoming more aware of the differences between themselves and their peers. This makes it difficult for a student to give an accurate self-assessment since the comparison factor may affect the responses. The results of the Renick and Harter study revealed that social comparison plays a part in LD students' perceptions of their academics. This is seen in the specific results that showed how LD students had poor self-perceptions when they compared themselves to non-LD students and high self-perceptions when they compared themselves to other LD students.

Heyman, Ph.D. (1990), doctor of counseling psychology at New York University, focused her research expertise in the area of self-perceptions of children and adults with LD. She was interested in how children and adults perceptions affected their self-attitudes and coping strategies. In her study she examined 87 LD students age nine to eleven. Her methods included standardized self-concept measurement instruments. She administered the tests individually or in small groups. The tests took from 15 to 25 minutes to complete. The results indicated that "in the case of children with learning disabilities, self-perception of the learning disability may have an effect on academic self-concept and self-esteem, which in turn may affect achievement in the future" (1990). Heyman's study supports those findings of Chapman and Boersma (1979) who determined that self-concept is a predictor of future achievement.

Interestingly, a study of first-and second-grade students in Israel was similar to the previously reviewed studies (Priel & Leshem, 1990). Again, students were asked to compare themselves to other non-LD students. This study focused on three domains:

Cognitive, Physical Competence and Acceptance Domain. The results indicated that LD students perceive themselves substantially lower in the cognitive and physical competence domains but not in the acceptance domain. This study used 80 first- and second-grade students and administered Harter and Pikes Pictorial Scale of Perceived Competence and Social Acceptance to determine the children's self-perception. This is the test that measured three domains: physical, cognitive and affective. This quantitative study supports data to date stating that in comparison to other non-LD students, children with LD feel less successful than do their peers.

Children with learning disabilities (LD) are more likely to be faced with academic challenge and failures. As a result it is understood that the LD students' self-concept is more at risk than a non-learning disabled student (Chapman, 1988; Heyman, 1990). The low self-perceptions directly affect achievement (Chapman, 1988). Since teachers are interested in positively affecting student achievement, including an assessment of the students self-perception with assessment of academics would serve to provide a clearer picture of the whole student (Rogers & Sakolofske, 1985). This clearer picture would allow teachers to make more individualized IEP's. Previous research on self-perceptions have focused on the overall academic student. To use self-perceptions to develop better instruction requires an understanding of each academic subject. To move toward understanding the self-perceptions of children in each area this study was designed to discover the self-perceptions of the participants as writers.

Throughout each article reviewed in this chapter I found several consistent findings. The first consistent finding is that the use of technology with learning disabled students has been found through many studies to improve the mechanics of writing, such as spelling, the number of words, grammar and number of revisions. The second consistent finding is that learning disabled students have lower self-perceptions as

students when compared to their non-learning disabled peers. The third consistent finding is that lower self-perceptions as students are directly related to lower achievement. The consistent findings were discovered through the use of a consistent design in each study. The consistent design was quantitative. The studies I reviewed revealed that the results were obtained by administration of standardized tests. In addition, writing samples were collected and analyzed numerically and statistically. To determine self-perceptions of students with learning disabilities the students in the studies were asked predetermined questions and then their responses were scored numerically. Further, each of these studies asked the students to give their responses while comparing themselves to other non-learning disabled students.

The consistent methods used produced consistent findings in many studies. What was not as abundantly available was information revealing how the students perceived themselves when not compared to non-learning disabled peers. To determine such information I chose to use a design of study, known as qualitative, that was different from the previously used consistent methodology, quantitative. Using a qualitative design allowed me to not have any predetermined assumptions about self-perceptions of learning disabled students. Instead, using a qualitative design, I assumed there was more to know about self-perceptions as writers than can be assessed by a standard measurement test. Therefore I proposed to determine how students with learning disabilities perceive themselves as writers when they are able to use the Alpha-Smart pro personal computer for written language assignments using a qualitative design to collect, analyze and report data.

Chapter 3: Data Collection and Analysis

In this qualitative study, I wanted to discover the self-perceptions of writing of students with written language learning disabilities who could use the Alpha-Smart Pro personal computer for written language assignments. The participants who were selected were two sixth-grade students who were verified as each having a written language learning disability. Data collection consisted of multiple sources including Q-Sort technique, interviews, observations and written work samples. A notebook, titled "the data collection notebook", was compiled and organized for the purpose of having all the data in one place.

The following chapter contains a detailed description of the setting, participants, data collection and analysis, and methods for verification. The data collection section includes a description of observations, the creation, pilot and administration of the Q-Sort, interviews, written work samples, the data collection notebook and the researcher journal. The data analysis procedure section includes a description of the coding system used, the analysis of the Q-sort, interviews, observations, written work samples and a description of how all were synthesized to establish findings. The last section of this chapter is about methods of verification. The methods described are debriefer, triangulation, external auditor, generalizability of findings and researcher position.

Setting

This study was conducted in a Midwest public school. The school contains grade levels of kindergarten through sixth. The school had one class per grade level with the exception of two additional combination classes, one of grades one and two and another of three and four. The school was designed with an open concept (classrooms with three walls and no doors). The participants were in the sixth grade classroom for the entire day. The participants had the choice of going to the learning center if they

wanted one-on-one attention from a special education teacher or a quiet work environment. The learning center was a classroom in the school where the special education students and teachers met for individual assistance or instruction. In the room was a desk for each student who qualified for special education services. In one corner was a reading area with a couch, a beanbag and a bookshelf. Interviews took place there. In another corner were some tables on which to lay out projects. The Q-Sort organizer was laid out here and the students sorted the cards. The counselor's office was also used for interviews. The counselor's office, located in the main office area, was a separate room with a door. The participants and I used this area when the learning center was too crowded or noisy. The participants were asked by me to let me know if they wanted to do the interviews in the office. They could use the counselor's office for any reason including, quiet, privacy, or confidentiality.

Participants

The participants were two sixth-grade students with written language learning disabilities. The participants were aware of the study I was completing and their roles in the study. After explaining the need for confidentiality I asked both students to give me a name they would like me to use for them in the study. The female student chose "Mary" and the male student chose "Chris". A detailed description of each participant can be found in Chapter four.

Data Collection Procedures

The data collection section includes a description of observations, the creation, pilot and administration of the Q-Sort, interviews, written work samples, the data collection notebook and the researcher journal.

Observations

Collecting data through observation has been a method of data collection that made it possible for other researchers to gather the data needed to answer the questions for which they searched for in many education-related qualitative studies (Brosnan, et al 1994; Renick, 1996; Heller and Sottile, 1996). In these studies, observations were the collection of detailed handwritten notes. These notes recorded verbal and nonverbal information such as communication, body language, reactions and interactions to their peers and their surroundings.

I recorded field notes for 18 observations of the two participants' behavior. These were observations of participants verbal, nonverbal, independent, and cooperative actions while in either their assigned general education classroom or in the learning center. With handwritten notes I recorded brief descriptions of what I heard the students say and what I saw them do. The notes were written on a yellow legal pad divided down the middle with a line. On the right side of the line I wrote notes of assignments on which the participants worked, to whom they talked, what they said, what they did, whether they paid attention to the task at hand or whether they were distracted, if so, by what. The left side of the page was used later the same day of the observation when I recorded my reflections of my observations. Each page was dated and labeled with the location, initials of the students being observed at the time and the subject area being taught at the time of observation. Several times when the participants would begin to engage in an action such as writing, talking, walking around the room or looking away from the task at hand, I documented the time, in minutes.

I observed the two students three times per week for six weeks. Each observation took approximately 30 minutes, some slightly longer, none were shorter. I began observation on Monday, March 23, 1998. Thursday, May 17, 1998 was the last

day I observed. This was a seven-week period of time; however, there was no school over the week of April 13 - 17, 1998 as the district celebrated a spring holiday.

Each day an observation was collected it was also read and my reflections on the content recorded. Direct observation and immediate reflection allowed me to record more specific behaviors, avoid leaving out information, and reflect on information fresh in my mind (Creswell, 1994).

Q-Sort: An Introduction

Q-sort is a data collection method designed to provide insight into the person doing the sorting, the participant. Several studies in the past have used this method to obtain self-perceptual information about their participants (Vance and Boals, 1989; Johnson, 1993; Szeto, 1994; Gustafson and others, 1994). "Q-sorts were developed to provide a simple, effective, easily scored self-concept assessment instrument which is role-specific" (Peterson and Yaakobi, 1978). The method involves the sorting of cards into a rank order to establish which statements are more like the student than other cards. In this study, the participants will sort cards that make statements about writing practices and beliefs.

Creation of the Q-Sort

The Q-sort for this study was created by developing statements about writing. Sixteen statements were developed from research articles and studies as well as statements of interest to the researcher (Appendix A). The purpose of the statements was to create a hands-on way of "showing" me how they perceived themselves and ideal authors as writers. This method was chosen because it allowed me to obtain direct information from the student in a personal way.

An effort was made to create a list of statements representing many aspects of writing spanning two domains, mechanics of writing and feelings of writing.

Statements numbered (1) through (4); 1) My writing flows in an order that makes sense to the reader, 2) My writing makes sense, 3) My writing flows better now than when I was younger, and 4) My writing makes more sense now than when I was younger, were developed after I read "Making Computers Work for Students with Special Needs", an article in the journal Teaching Exceptional Children (Storeygard, Simmons, Stumpf, and Pavloglou, 1993). The article reports that children with a learning disability (LD) who participated in a separate writing class expressed to the researchers that they felt they had more of an opportunity to write at their speed and level while receiving the help they needed from qualified support.

The researchers indicated that the students, while using a computer in a classroom separated from the general education classroom, were able to make their writing make more sense. A student in the study mentioned that his writing was less sporadic and more fluent since participating in the writing course. After reading these ideas presented in the study and thinking about the writing of the two students I was studying, I created the four statements, listed above. The four questions were designed to cover the area of writing, including clarity and organization ("making sense") and fluency ("writing flows"). It is my opinion that as a result of their written language learning disability their writing was not fluent and did not make sense. I was interested in understanding how they perceived the fluency and clarity of their own writing and, therefore, created the four statements.

Statements six through eight and thirteen, i.e. 6) I rewrite my writing several times. 7) I do not rewrite my writing at all. 8) I rewrite my writing only when it is required for an assignment. and 13) I think it helps me to write a better paper if I write a rough draft first, were developed from "The Effect of Word Processing on the Revisions of Basic Writers", a quantitative study by Carole McAllister and Richard Louth,

Assistant Professors of English at Southeastern Louisiana University (1989). In this study, one of the first to examine basic writers, the researchers discussed the positive impact that word processing had on revision. Because I am the participants' teacher, I know that revision is a strategy seldom used by the participants. I was interested in how they perceived themselves to use the strategy of revision.

Statements number five and fourteen, 5) When I write I make a plan., and 14) I do not edit my writing my writing at all, were developed out of my professional curiosity after reading articles that discussed the value of prewriting and basic editing as study strategies that are rarely used by learning disabled writers (Anderson-Inman, Knox-Quinn and Horney, 1996). Wondering how the students I was studying valued these strategies, I made statements for them to sort to show me how they believe they and ideal authors use pre-writing and editing.

Statements nine through 12, 15 and 16 were created by the researcher out of professional curiosity. Based on my knowledge of the students and knowing what perceptions I was interested in understanding further, I created these six statements to fill in the gaps between what I found in the research and what I still wanted to know. Understanding what prompts the participants to write was represented by two statements, nine and 10; 9)Most of the time I write because I want to. and 10) I write because an assignment is given. Knowing how they perceive themselves to use writing was represented by two statements, 11 and 12; 11) I think writing is a great way to express how I am feeling about something. and 12) I think writing something down is a great way to tell others what I need or want. Gathering information on how they perceive their overall quality of writing was represented by the creation of cards 15 and 16; 15)I think I am a good writer. and 16) I think other students would enjoy reading what I write.

The 16 statements were developed and written onto 3 x 5-inch note cards. The statements were categorized into two equally numbered sections: a) eight statements related to mechanics of writing (M) and b) eight statements related to feelings, perceptions or thoughts about writing (T). Each statement was numbered one through 16, in no particular order, and labeled with an M or a T. For example, one index card had the statement "I revise my writing several times." and in the bottom right corner of the card was written, 6M. The six was for the number of the card and the M categorized the card as a statement pertaining to mechanics of writing. The number and letter were used to record the placement of the card on the Q-Sort organizer (Appendix B).

I administered two double Q-Sorts to each participant. One double Q-Sort was administered on the first day of data collection and the second double Q-Sort on the day prior to the last day of data collection. A double Q-Sort is one administration time which consists of two separate sortings. Each of the two sortings had a different purpose. The first sorting was their perception of ideal authors and the second sorting was their perception of themselves at the time of the sorting.

The Q-Sort organizer was a visual tool for the participants to use while ranking the statements. The organizer was a large poster board with index card-size rectangles drawn in which 3x5 inch index cards containing the statements were placed. In this study the rectangle shapes are called outlines. There were six columns laid horizontally with one index card outline in columns one and seven, two outlines in columns two and six, three outlines in columns three and five and four outlines in column four. Each of the six columns was labeled beginning with "Least like me" for column one, proceeding in sequence with "Not very much like me", "Sort of unlike me", "Undecided", "Sort of like me", "Very much like me", "Most like me". Immediately after each student completed each sorting I recorded the card numbers in their placement on the Q-Sort organizer on

an 8 1/2 " x 11" version of the visual organizer (Appendix B). The distribution of the two categories of cards- mechanics and thoughts/feelings/perceptions were recorded on a separate form called Categorical Distribution of Cards (Appendix C). This form made it easier to view the distribution of the cards for data analysis.

Pilot Q-Sort

Prior to administering the Q-Sort to the study participants, a pilot administration of the Q-Sort was administered to two sixth-grade students, one male and one female. Both students volunteered to participate in the pilot Q- Sort. The purpose of the pilot administration was to determine if the words and phrases I had selected to express the statement on the card would be interpreted in a similar manner by both sixth graders. I was concerned about vocabulary choice and word usage as well as meaning.

Each pilot administration was individually administered. Each student was shown the cards and the column headings on the Q-Sort organizer during the individual administration. Both students, interviewed separately, were asked to read each card and column heading and tell me in their words what the statement or phrase meant to them. If a word or idea was unclear it was to be indicated that to me. Together the student and I discussed some alternative word choices and decided on a word or phrase to replace the unclear portion. The purpose of this word exchange was to allow the meaning which I sought to be interpreted by a sixth grader in the same way. For example, card number one-M, "My writing flows in an order that makes sense to the reader," initially was stated as "My writing is fluent." Both pilot Q-Sort subjects were unable to state clearly in their own words what fluent meant. After discussing it with each subject I reviewed my notes later that same day and rewrote the cards. The students individually returned to the learning center the next day. Both students agreed that "..flows in an order that makes sense to the reader." was clearer than "fluent" as a way of saying the same thing.

Both students agreed that their perceptions of the meaning of the statements and column headings were the same as my intent for the meaning for the statements and column headings.

Administration of the Q-Sort

The actual Q-Sort was administered to the participants in the learning center. The Q-sort was administered twice, once on the first day of data collection (Monday, March 23, 1998) and again at the end of data collection (Monday, May 11, 1998). A visual organizer was placed on a table and the index cards containing the statements were stacked the side in random order. Each complete administration (including instructions and two sortings) took 10 to 20 minutes. The instructions and the purpose of the Q-sort were given orally. The students were asked, first, to sort the cards for an ideal situation and second, a real situation. "Ideal" was to mean "the characteristics of a writer you perceive to be a great writer". "Real" was to mean, "the characteristics of yourself as a writer today". The students were assured that their responses would not influence their grades in the classroom. I also assured them there were no right answers and asked them to be as honest as possible. In my professional judgment, I think both participants were honest and the responses valid reflections of their opinions without pressure by peers or teachers. Both participants were aware of their role in this study as well as the role of the Q-Sort.

The students completed a double Q-Sort as part of this study on student perceptions of themselves as writers. A double Q-Sort is one administration time in which one student sorts the same cards twice. The first sorting was of what the students would like to be true about themselves as writers, also described to the participants as what they believe to be true about ideal authors. The second sorting was of the reality of their perceptions of themselves as writers at the moment they sort the

cards. The double Q-Sort, as discussed in Peterson and Yaakobi's Manual on Q-sorts, was conducted in a 15-minute period. (1978) The students needed an individual-sized desk at which to work in order to spread out the cards and the organizer (Peterson and Yaakobi, 1978). The responses of the students were recorded on smaller representations of the organizer by the researcher as they presented their sorted cards to me.

Interviews

Interviews allowed me to gain direct information pertaining to the perceptions of the participants themselves. Interviews have been used to understand the perceptions of the participants or those surrounding the participant to gather further, more-in-depth data (Brosnan et al, 1994; Renick, 1996; Heller and Sotille, 1996; Hurley and Wooden, 1994). By using the interview method, the researchers felt they were able to obtain the answers to the questions they were studying.

I conducted interviews with the participants once each week. These oral interviews occurred midweek, usually on Wednesdays. Each interview took 14 to 20 minutes. The interviews took place in the counselor's office or in the special education room, known to the participants as the learning center. I held the interviews in the learning center during a time when there were few or no people in the room so as to provide a quiet, distraction-free atmosphere so the participants could talk honestly. At times other students did work in the room. The participants were instructed to let me know if they wanted to do an interview in the counselor's office for privacy or quiet. Only once did we chose to conduct an interview in the counselor's office (Int p19). The other interviews were in the learning center.

The interviews were designed in a semi-structured manner. By this I mean that I developed questions prior to each interview. However, the interview was not limited to only those questions. Responses wanted from the participants sometimes required

further explanation on the participant's part. At times I wanted to know more about the students' responses. The non-planned questions I asked during the interview are referred to as spontaneous questions. For example, I asked Chris the structured question "Why did you place card 15t, "I think I am a good writer"., in the undecided column?" His response was, "Because I ran out of room to put it where I wanted it." Wanting to know more about what he would have done, I asked the spontaneous question, "If you had more space where would you have put it? (Int p.18)". The responses the participants gave were recorded by hand onto a computer generated list. The list had the pre-established questions and several inches of blank space to record the answers. The initial interview questions and the spontaneous questions are provided in Appendix D. The spontaneous questions are indicated by italics in the appendix.

Professional curiosity prompted the questions for the initial interview. For example, I asked both participants the questions which follow: What do you think of yourself as a writer today?, What are your strengths as a writer?, What are your weaknesses as a writer?, How do you feel when you are assigned a writing project?, What kinds of writing do you do?, and Where is your favorite place to write?(Int p.14).

The second through fifth interview questions were created, a) to further understand the card placement in the initial Q-sort, b) to comprehend more fully the notes collected during observations (McLane, Spielberger, and Klugman,1996), and c) to discuss various characteristics of the participants' written work on which they worked during the time of each interview. The sixth and final interview was given the day after the final Q-Sort, seven weeks after the initial Q-Sort was given. The questions for this final interview were developed from the participants' placement of the cards during the final Q-Sort. In the final Q-Sort (Ideal) placement, Mary placed the card "I think writing is a great way to express how I am feeling about something" in the column titled "Most

Like Me" (Q-Sort p.13). In the initial Q-Sort(Ideal) she placed the same card in the column titled "Very Much Like Me" (Q-Sort p.5). I asked her about the movement of the card in the final interview. "Why did card, "I think writing is a great way to express how I am feeling about something", move from "Very Much Like Me" to "Most Like Me"(Int p. 33)?

Written Work Samples

The collection of written work has been a method of data collection for other educational research studies (Brock, 1994; Diaz, 1990; MacArthur, 1991). Researchers have collected student-generated samples of written work to collect data on topics varying from collaborative writing, generalization of spelling with mildly mentally handicapped students, and use of revision by LD students (Brock, 1994; Diaz, 1990; MacArthur, 1991). Samples of written work by students, including journal entries, responses to story prompts, personal writings, poetry and reports assigned in the general class were collected over the course of the six weeks of the study. The collected student written work samples were done by hand or on the Alpha-Smart Pro. They were collected with the intent of using the pieces for supplemental data analysis. I collected eleven pieces of work from Mary and six pieces of work from Chris. I collected each piece with permission from each participant. The samples at a minimum were collected at the rate of one per week. More pieces of work were collected from Mary because she volunteered additional pieces besides the ones I collected each week. Chris's collection represented the minimal amount possible because of his reluctance voluntarily submit pieces to me. Each piece of written work is dated and labeled with each students' initials. The pieces are chronologically organized in my data collection notebook. The collection of work samples allowed me to gather data in an unobtrusive manner

(Creswell, 1994). "Unobtrusive" implies that I did not disrupt the written work process by collecting it to analyze.

Data Collection Notebook

A notebook was created to organize all the data collected in this study. This notebook was a three-ring binder with dividers titled with each data collection method: Q-Sort, Observations, Interviews, and Written Work Samples. The data, collected on notebook paper, were placed chronologically into the appropriate section and pages were numbered. The reader can assume that the larger the page number, the further into the study the data were collected. I started over at page one with each new section. This notebook was used in two ways, as the organized reference book used to cite within the discoveries section of this study, and by the auditor as she verified the existence of the data I collected as well as the discoveries developed from those data as reported in Chapter Four(Bogden and Biklen, 1992; Linclon and Guba, 1985).

Researcher Journal

A spiral notebook was used in which to record handwritten reflections as I looked at the data. I read the data on eight occasions: once a week for six weeks, during the fourth week when I was not collecting data because of spring break, and after the last day of data collection. As I read, I made notes in the research journal about what I was thinking. As the data collection period progressed I began to make notes reflecting on the data collection materials themselves, e.g. the interview response forms, the Q-sort visual organizers, the observation pages and the written work samples. I did this because it seemed more useful to me to have the reflections directly on the piece of data about which I was reflecting. The researcher journal was used as a place of reflection in which to write when other resources were unavailable.

The researcher journal is the source of data to which I refer in Chapter four. After citing quotes from interviews, documentation of card placement in a Q-Sort, a piece of written work or an action in an observation in the discovery portion of this study I cite a section and a page number in the researcher journal. For example, from an initial interview, I quoted Chris as saying "My weaknesses as a writer are puntuation, capitals and grammar." I cite this quote as (Int p16). This code means the section in which teh quote is found is "Interview section, Int". The p.16 stands for Page 16 of that section.

The reader needs to know that each section starts over at Page one. The higher the page number the deeper in the study are the data.

Data Analysis Procedure

The data analysis procedure section includes a description of the coding system used the analysis of the Q-Sort, interviews, observations, written work samples and a description of how all were synthesized to establish findings.

Coding of Data

To code the Q-Sort, interviews, observations and written work samples I used abbreviations. For example, for Q-Sort sortings, interview responses and written work samples if a point about revising a paper emerged, I wrote "rev" on a post-it note and stuck it to the form on which the response had been recorded. To code the observations I used abbreviations but I wrote those abbreviations on the left side of the page on which the observation notes were taken. I used a pen with ink of a color differeny from the color of the ink used to take the notes so as to be able to discriminate easily between the original notes and the codeswhen looking at the pages. Some of the abbreviations I used were a) "TAT", for attending to the task at hand; a negative sign "(-)" next to the TAT was used to show not attending to task at hand; and a positive "(+)" sign was sued to

show attending to the task at hand, b) "PART", the abbreviation for participating in class activity, c) "wtg", the abbreviation for writing, was used to indicate the student was engaged in writing in some manner, either handwritten (HW) or the Alpha Smart (AS), d) "M" for mechanics, when an observation was made of an action or verbalization with regard for writing mechanics and, e) T for thoughts and feelings about writing, when the student was observed making a verbalization or action in regards to writing thoughts and feelings. I wrote these codes in the area of the statement or action that it corresponds to.

Data Analysis

The method of data analysis I used in this study is modeled after the method suggested by Tesch called "De-contextualizing and Re-contextualizing (Tesch, 1990). In this method the researcher breaks down the whole data into smaller parts, de-contextualization. Each part is then labeled with an abbreviation that matches the kind of data it is labeling. The smaller parts are then put together with other smaller parts of the same abbreviation. The data have then been re-contextualized into themes of similar data from a variety of sources.

In the initial three weeks of data collection I gathered one Q-Sort, nine observations, three interviews and 11 samples of written work. During the second three weeks of data collection I gathered data from one Q-Sort, nine observations and six samples of written work.

As I read the data collected through all the methods of data collection I coded it with an abbreviation. After all the data were coded I looked for abbreviations in the different methods of data collection that matched. The discoveries in Chapter four are the result of the collection of data and grouping of matching abbreviations from at least three data collection methods. A description of how the four data collection source-- Q-

Sort, interviews, observations, and written work samples--were analyzed and synthesized into discoveries follows.

Analysis of the Q-Sort

Beginning on the same day of the administration of the initial and final Q-Sort, I spent five hours over two days looking at the placement of the cards on the visual organizer forms. When doing this analysis I looked at the participants data individually. When I read the Q-Sort visual organization forms I looked for differences in the placement of same cards from the real Q-Sort to the ideal Q-Sort. Next I looked for was similarities between the real and ideal placement of the same cards. When I found either discrepancies or similarities I noted them in my journal or on the form itself. I immediately wrote a question about the similarities and differences I would like to ask to further understand the discrepancy or similarity. For example, Chris placed the same card, "When I write I make a plan.", in the undecided column at the initial real Q-Sort and in the column titled "Most Like Me" at the final real Q-Sort. I wrote a questionabout this for Chris for the final interview. I said to him, "The card, 'When I write I make a plan" jumped from "Undecided" to "Most Like Me". Tell me about this. What kind of plan?"(Int p.31)

The next portion of analysis of the Q-Sort was comparing the sortings of specific cards. I looked for the placement of these two cards on the visual organizer forms. I called these specific statements "star cards" and they were noted during data collection on the visual organizer form by a small star. The cards are ones that Ias the researcher decided were most significant in terms of data analysis of perceptions of students' writing. The two cards were; a) "My writing makes sense." and b) "I think I am a good writer". I chose these two cards as star cards because of the implications they carry. For example, "My writing makes sense", is a card that falls into the mechanics

category in the category distribution as described in the section, "Creation of the Q-Sort". This card statement means the writing of the students mechanically makes sense through self-perceptions of the sorter. The sixth-grade teacher and I taught all the sixth grade students that, in order for a writing sample to make sense, it must be in an appropriate order, use understandable words, flow from one idea to another, and be legible. Where participants placed this card showed me how the participants saw the mechanics of their writing at the time of the sorting.

In my analysis I looked for the placement of the star cards on all four sortings for each student. I made reflection notes about discrepancies and similarities from the real to the ideal sorting as well as the movement of the cards from the initial *real* to the final *real* Q-Sort administration and the initial *ideal* to the final *ideal* Q-Sort administration. Any discrepancies, similarities or lack of movement was noted on the form or researcher journal and then turned into an interview question to be used later. I created interview questions to further my understanding of their perceptions of themselves as writers, based on my findings of the placement of the star cards.

After investigating the star cards I looked for the discrepancies in the Q-Sort placement of the other cards. I was looking for cards that changed position or did not change position from the time of the initial to the time of the final sorting. I noted the discrepancy on the form or in the researcher journal and then coded it. I looked for and coded change or lack of change in card placement between the real and ideal sortings at each Q-Sort administration.

Analysis of the Interviews

To analyze each interview I followed a routine to assure tconsistency in methodology. I scheduled a 30-minute period immediately following each interview to be used for reading and reflection of the interview responses. I used this period as

scheduled after three of the six interviews. After the other three interviews I was needed in other parts of the school for student related situations. On those occasions, at the close of the same day of the interview, I used 30 minutes to read and reflect on the responses.

Despite whether the reflection took place immediately following the interview or at the end of the day, the process was the same. I coded questions and answers with abbreviations pertaining to their topic.

In addition to coding, I reflected on the interview form or entered my views in the researcher journal. The reflections were of notes indicating an answer intrigued to me because of the support or lack of support a) of the students' actual performance as seen by me in the observations or b) of the information gathered in the Q-Sort. I would also contemplate ways to understand further an answer given. I would write questions to clarify words, ideas, or simply ask the students to elaborate on why they answered the way they had. The questions I created were typed into the next interview questions.

Analysis of the Observations

Initial analysis of the observation was in the form of reflection time that occurred immediately following the 30-minute observation time. In this reflection time I coded on the left side of the yellow legal pad data with abbreviations related to the topic of the observed event. Observations were used to develop interview questions about discrepancies or when I

wanted to know more about what a participant did. For example, Chris was sharing with his classmates pictures from a magazine that showed the scenery of the Bahamas, a group of islands he had visited and about which he was planning to write a report. In an interview I asked him why he chose the Bahamas as the topic for his report and he replied that since he had been there it should be easy (Int p.16). This led me to ask why

he wanted it to be easy to write the report. He replied with a response that supported the fact that writing was quite difficult for him; and thus choosing the Bahamas as a place interesting and familiar to him would eliminate some of the difficulty and dislike of writing. This explanation and understanding of some of Chris's motivation for his choice of the writing topic came from an observation note I made.

I also wrote notes to myself to create a question about points on which I needed clarification or further understanding. I did the written reflections at a desk in a room void of student activity. This period of solitude and quiet induced thoughtful reflection.

Analysis of the Written Work Samples

The written work samples were analyzed in the same manner as Q-Sort, interviews and observations. I collected one voluntary piece of written work per week. I read the collected pieces within the week I collected them. The students, knowing I was using the samples for the purpose of the study were allowed to choose pieces to give me or agree to give me ones I selected. In addition the students could submit any piece of writing to me above and beyond the one piece per week. The samples were coded with abbreviations of the topic material.

Synthesis of Data Analysis

After the data were coded (de-contextualized) and in one notebook I began looking for abbreviations that existed in at least three methods of data collection (Tesch, 1990). I did this with color-coded "post-it" notes. For example, I chose blue post-it notes for all the abbreviations of "wtg-exp". This codemeans "writing to express (him or her) self". Because the data notebook was in chronological order the post-it notes marked places where writing to express the self also appeared in chronological order. After color coding the initials, I verified which colors existed in three methods of data collection. The ones which did I used as discoveries. I proceeded to tell a chronological

story of the development of each discovery. The discoveries may be read in Chapter four.

Methods for Verification

Debriefer

In an effort to establish credibility and trustworthiness I used a debriefer. This person is similar to an outside debriefer (Lincoln and Guba, 1985). As the debriefer in this study, I used a fellow graduate student who, like me, is a qualitative researcher and was thenconcurrently writing a qualitative study. Both this person and I worked very closely this year. We were each teachers at the same school, each participants in an intensive one year master's program, and each completing the thesis option as our graduate requirement. We spent time together in professional and personal settings. Because if the nature of our relationship, we became sounding boards for each other during the research and analysis portions of our studies. We discussed data we had collected while we in classes at the University, at our elementary school, on the phone in the evenings and while working on our theses together. Through these discussions she offered input about her perceptions of data I had collected and her opinions on possible discoveries. I used her input to either support or contradict my thoughts as I developed discoveries.

Triangulation

Triangulation is the collection and analysis of data through several sources in order to lend more credibility to a study. The discoveries in this study were written after it was determined that matching codes existed in at least three methods of data collection. It is essential, in order to make a credible discovery from the data I have collected, that each discovery be supported by multiple sources. This will help to convince the reader that the responses and observations were supported by more

than one source, and therefore a valid discovery can be discussed with conviction. A rationale for such a verification is given in Merriam (1988) when the author quotes Denzin as saying, "The rationale for this strategy is that the flaws of one method are often the strengths of another, and by combining methods, observers can achieve the best of each, while overcoming their unique deficiencies" (p 69). In this study I collected data through Q-Sort, observations, interviews and written work samples.

External Audit

An external auditor is a knowledgeable researcher who confirms my data and data analysis (Bogden and Biklen, 1992, Lincoln and Guba, 1985). The role of the external auditor was to confirm the existence of data, the credibility of the procedures used in the collection of the data and the dependability of the codes. The auditor was a fellow graduate student who was knowledgeable of qualitative research and is concurrently writing a qualitative thesis.

Generalizability of Findings

The intent of qualitative research was not to generalize findings but to form a unique interpretation of events in the study. The findings of this study can be used to further understand the participants and the unique situation of this study and were not to be generalized to other populations. The findings of this study can also be used to further understand those in a similar setting.

Researchers' Position

As the primary instrument of research in this study it was important that I address my role and assumptions that concern this thesis. I was, in addition to data collector, fulfilling the role of the participants special education teacher. It was my belief as a special education teacher that students with learning disabilities need venues different from the general education student through which to demonstrate

their academic knowledge. Therefore, it was my assumption that removing a barrier, handwriting with paper and pencil, and providing a substitute tool, the personal Alpha- Smart Pro computer, would benefit the participants. I expected to describe the benefits through this research.

It was also my assumption that LD students have lower self-perceptions of themselves when they are asked to compare themselves to other non-LD students. I assumed that this lower self-perception negatively influenced their motivation to try to succeed in school. The lack of effort that some LD students exude positively influence their chance of failure or becoming frustrated with the learning process. It is my belief that understanding the perceptions the students of themselves without comparison to others will lead teachers to a more accurate understanding of the students they are working the and can assist the motivation factor in the students learning.

Chapter 4: Discoveries

The Participants

I will begin this chapter with an introduction of Mary and Chris. I will do this in an attempt to give the reader an understanding of the two participants as writers in this study.

Mary

Mary was a sixth grade student at the study site. She had attended this school for three years. Her family was in the U.S. Air Force and therefore she has moved from school to school. She anticipated moving at the end of this year. As I stated earlier in Chapter 3, Mary has a verified written language learning disability. Mary lived with her mother and step-father. There are three siblings in the house, two of which are older and one brother who is younger. Her brother attended the same school and Mary and he appeared to have a close relationship. I sensed this as I saw them walk home together, greet each other in the hallways, participate in the same activities on the playground, and periodically eat lunch together. Mary had many girlfriends and was liked by many students in her grade and some in lower grades. I knew this from her telling me about the many birthday parties she was invited to and the many girls who came to me throughout the year and shared stories about fun with Mary. Getting involved in student relationships was a role I voluntarily and informally took on in the year. Being involved with the students at that level allowed me to get to know the students in a different light than I would if I had only been an academic instructor. The initial semi-structured interview was designed to allow me the opportunity to get to know each participant. Mary was excited about some of the opportunities to write that presented themselves in the school year. Each year the students can choose to participate in a book-making process. Mary volunteered to partake in the process and enjoyed it. She said:

> I think I'll be writing a lot more Golden Crown's (books). I get a lot of flashes of real life, usually exciting or scary things that would be good ideas for Golden Crown's. I write them (ideas) down because I will forget them if I don't. (Int p.14)

Mary had an understanding of what her strengths and weaknesses as a writer were. She told me:

> The best things about my writings are that "they are getting stronger." Stronger means "the reader will know more about how I feel as the author. Also my 'flashes' (of story ideas) are getting scarier because my own life is getting scarier as I get older."(Int p.14)
>
> "The parts of my writing I want to improve on are the scary or exciting parts because right now some of them are boring. I want to have less and less pictures to where I can have no pictures. I want to be able to tell how the person in the story is feeling. I will do that by telling with words instead of pictures. (Int p.14)

Mary took the time to find a place to write that she liked. When she talked to me about this she said:

> My favorite place to write is by the...creek (ellipsis added to show elimination of the name of the creek for protection of the participants location). That's where most of my adventures come from. I love to write there because I love animals and water and I usually walk in the creek with my notebook in my hand, writing. I write stories about ....creek and I sit in the creek to write them. (Int p.14)

Mary was open about sharing her personal expressions (except her diary at home) with others whom she wrote about. She saw this as a way to help solve conflict with peers or family or teachers. Mary told me:

> I usually give them (written feelings) to another person or friends or whoever I am writing about - but mostly to my mom. The only one I don't share is my diary. I write in that about once a week or not at all. I share the stuff sometimes so people know how I feel of what they done to me or to find out how they are feeling. (Int p.21)

Mary was confident in her writing ability but is nervous about her reading ability.

> Sometimes I get nervous reading aloud in front of people. My reading aloud is squeaky sometimes when I talk. I would rather hand it to someone else to read aloud. I am not shy about my story just reading it out loud. (Int p.21)

Chris

Chris was a sixth-grade male at the study site. New to our school this year, he transferred in from Colorado. As I stated earlier, in Chapter 3, Chris has a verified learning disability in the area of written language and a behavioral disorder. From my observations of Chris in his classroom, as well as other parts of the school (library, lunch room, playground), I felt that Chris struggled with fitting into a group of peers. For example, several times Chris would spend his time in the classroom trying to make his classmates laugh (obs p.1, 6 , 9). On March 30, 1998 I was in Chris's classroom during a silent reading session. The general classroom teacher left the room and during this time Chris stood up and began telling jokes and suggesting to his classmates that they all sneak out the window to surprise the teacher when she returned. Several of his classmates did

not laugh and instead told him to "shut-up" and sit down. He did stop but he was laughing quietly as he sat down. When the teacher returned he began reading silently(obs p.9). This observation was typical of Chris. When substitute teachers were needed in his classroom, Chris's behavior became inappropriate and as a result he would be required to work during the day in the learning center or the office in an attempt by his teachers to prevent outbursts that would have long lasting effects, such as being sent home or being suspended.

Chris's behavior disorder would manifest itself in angry outbursts when consequences were given to him with which he didn't agree with. During these times he would get violent, hit desks, toss books, yell and kick. His behavior outbursts were always brief and he was apologetic after each one.

Chris seemed to relate well to adults. His conversation skills were excellent. Several times he was working with me in the learning center and upon finishing his work would spend time asking about my life and my job as a teacher. As he was curious about other students who attended the learning center, he asked me about them.

Chris thinks he can be a good judge of his own writing and does not rely on others to validate the quality of his writing. He put the card, I think I am a good writer , in the undecided column because "I just don't know (if I am a good writer). I don't go back and look at my writing and think if it's good or bad" (Int p.18). I followed this up, immediately, with "How do you think you could find out if you are a good writer? Would you decide for yourself or do you think you have to give them to someone else?" Chris paused for a while and appeared to be stuck trying to come up with an answer so I followed up with, "Which opinion is more important, yours or others?" Chris replied quickly, "Me, because it's more important what I think of myself"(Int p.18).

Chris does not cite writing among his favorite things to do but when he does start writing he writes a lot. "If I have something to write I will if I'm in the mood, which isn't often. When I start writing I will write and write, like 12 pages sometimes, until I get tired then I just stop" (Int p. 16).

Chris does have a favorite place to write and uses that place to write. When he is done writing he does not find a purpose in keeping his work.

> My favorite place to write is really cramped and small. I don't know why. It is at home between my bed and toy box. I take loose leaf paper and write and throw it away. It (writing) is just for humor so there's not much you can do with it. (Int p.16)

Chris has a clear understanding of what he perceives to be his own strengths and weaknesses as a writer. My strengths of writing are "I exaggerate and that gets the readers attention and interest in what I write" (Int p.16). My weaknesses are "my punctuation, capitals and grammar"(Int p.16).

Chris told me about what he thinks happens when a teacher grades written work and what the teacher is grading for.

> I think she (teacher) or the para (paraprofessional) grade them and hand them back. They grade them for if we know what we are doing. I think teachers assign written assignments to know what we are capable of and how we are coming along in our writing. (Int p. 29)

Over the six weeks of data collection, Chris change his placement of the Q-Sort statement "When I write I make a plan." from "Undecided" to "Most like Me". He explained this by saying, "Now (at final interview), in my head I think about what I am going to write about - I think of an interesting way to make it sound interesting" (Int p. 31).

Over the data collection period, Chris felt he was able to make his writing make more sense. "I go back now and change what doesn't make sense. I didn't do that before (Int p.31).

Chris was motivated to do well in school and writing in order to be allowed by his parents to participate in summer activities. When I asked him why his placement of the Q-Sort statement "I rewrite only when it is required." moved from "Very Much Like Me" at the initial Q-Sort to "Not at All Like Me" at the final Q-Sort, he replied, "Because I want it to be good. I want it to get a passing grade, try hard, make it best, rewrite it if it needs it, so my grades have to be good to do summer things like visit my mom, go to (an amusement park) with my dad and step-mom, and church activities, go carts, archery that kind of stuff" (Int p.32).

Discoveries

Writing For Self-Expression

On the first day of data collection I administered the Q-Sort to Mary. She sorted the cards for an Ideal Q-Sort situation first. For this sorting she was to order the cards to represent an ideal author from her perception. When she did this she indicated an ideal author would find it "Very Much Like Me" to view writing as a "great way to express how I am feeling about something" (Q-Sort p. 5). Immediately following that sorting of cards Mary organized the statements to reflect how she felt about herself as a writer today. She indicated that "writing is a great way to express how I am feeling about something" by placing that card in the column titled "Most Like Me". In an effort to understand her perceptions as to why she thought "writing is a great way to express how she feels about something", I asked her, in an interview 10 days later, to tell me more about this. Mary replied "telling my feelings on paper helps me to feel better and makes it clearer to the other person how they made me feel" (Int p.19). I then asked her

about motivation for writing her problem, as opposed to saying it (Int p.19). She explained, "My writing is clearer than when I talk. I don't know why it just is. Besides, when I write I can include everything, when I talk I leave out important feelings cause I go so fast" (Int p.19). In my attempt to understand this even more I asked another spontaneous question of her ,"Do you write slower than you talk and that's what makes it clearer?" Her answer was interesting, "I take my time when I am writing in my journal or diary. I sit on my bed and write *everything*" (Int p.19). I asked this question because I was looking for an explanation as to why she would use a method, handwriting, that is significantly difficult for her as a written language learning disabled student over a simpler method, such as talking. Her response was interesting to me as her teacher. I observed her avoid writing in class many times, on occasions prior to the onset of data collection and times after data collection had started (obs. pp10, 18-1,18-2,18-3,20,21, 22,24,27). As can be read in the data notebook on Observation Page 10, Monday, March 30, 1998 Mary refused, saying no and resisting completely the instruction to go to her desk and get started on her report. She did not want to take notes from the encyclopedia for information on her Antigua report with paper and pencil or the Alpha-Smart. Instead, Mary wanted to use the internet to retrieve information already printed on the computer and which just needed to be printed and highlighted (obs p.10). During another classroom observation on Monday, April 20, 1998 during journal writing time, I again watched Mary avoid writing. Mary spent 15 of the 30 minutes provided for personal writing time pouting, head hanging down and arms crossed. She spent the additional 15 minutes of time talking with her classmates seated near her (obs p.20).

Because I observed her avoiding writing and occasionally refusing to write in class, as I described above, I was interested in why she would take time

to write personal items down for the purpose of expressing herself. It surprised me that Mary would take the time to write when she is not required to. I asked her, through another spontaneous question during the same interview, to tell me more about why she chose to write her problems, in light of her learning disability, and she said "I enjoy writing this (expression of personal problems) and it makes me feel better about the problems I have" (Int. p19). Mary shared with me, some examples of her writen self-expression. This demonstrated to me that what she says she does with her writing is something she actually does. The following is a piece she gave me after she became upset with her teacher.

> Here I am in a room of nothing no hay to sleep on, no food, no neibors, no selmat (cell mate), no paper, and no life I have a pencil without paper but what is a pencil with out paper I voices and I start saying help me I need help I hear keys I tern silent and I here a key opening a door my door your free a friend, payed to get you out. I jump with joy there he was my best friend he gave me paper and pencil, I wrote how it felt in there all alone (ww p. 13)

This sample of Mary's written work was given to me on April 1, 1998 during week two of data collection. She wrote this after a conflict with her teacher. Mary had become upset after she asked if she could reprint some information from the internet that she had lost and needed for her report. Because of a need to allow others to use the computer, Mary was denied permission to use the computer again until everyone had a chance. This upset Mary and as a result of her emotions she wrote the above quotation.

Mary told me she wrote the following as she began to "feel better" about the conflict she was having with her teacher about not being able to use the computer.

> As the world had aproced (approached) me I felt fear in me and new that was not alone at all so I felt my soul fall to my toes and started to shake and scream I felt a cold wind hit my neck I terd (turned) and screamed with totaly wit fear and ran faster that before our of the honted house large feet followed me but no body. I stop and climb a tree and look at the sky I see a body boy wit a string on the feet. The body is laughing and a mother comes and says "You playing with more kids" "gaga gogo" and laughed "good bady" laughed some more (ww p.14)

After she read it aloud to me, I asked her to explain this passage so I could be sure I understood her words and meaning. She told me she didn't know what it meant. "I just wrote what I felt and so I can't tell you what it means after I wrote it" (obs p. 16).

Based on her interview responses (Int p.19), Q-Sort card placement,(Q-Sort p.5) observations (obs p.10, 20), and written work(13,14) I believe that Mary uses writing for personal reasons and values her ability to clear up problems in her life through this method. Mary's interest in writing does not apply to writing a report for an assignment. I think that the apparent contradiction in her purpose for writing, reinforces her placement of the card that says that writing with the purpose of expressing herself is most like her.

In a later interview (Int p.21) I wanted to know more about how often she writes and what she writes about specifically. I felt if I could get a picture of how often Mary writes to express herself I could understand more clearly the importance that it holds in her life. Mary shared with me that she writes often about her sister and brother and the problems they have. Her definition of "often" is "3 times a month"(Int p.21). Mary told me that her brother and sister hurt her feelings by doing things to her that bother her or scare her. "Usually I write about my brother and sister when they hurt my feelings.

Then I go sit on my bed and write about it." (Int p. 21) I asked her, in a spontaneous question, "What do your brother and sister do to hurt your feelings" (Int p.21)? She replied that, "They bury me in a box or blankets and I am afraid" (Int p.21). In an effort to understand her perceptions of the things about which she writes I followed up the previous question with, "Is that the only thing you write about-your brother and sister and that they hurt your feelings" (Int p.21)? After taking a moment to think about it she replied, "Yes" (Int p.21). The next question in this interview that I asked was, " I received three pieces of writing work (personal)from you in two days last week. Is that a normal amount of writing for you to do in a day or two? Do you usually write more or less" (Int p.21)? Mary told me that this was an unusual amount of writing for her to do. She explained this as follows, " I get mad usually very easily and I got upset so I wrote a lot more those days" (Int p.21).

Because of the examples she showed me which detailed the problems she experienced with her classmates and teacher (ww p.13, 14, 17), I found her comment that she "only writes about problems with her brothers and sisters"(Int p.21) to be contradictory. In one of the pieces of writing that she had given me (ww p.13) she expressed her feelings about treatment she felt she didn't deserve from her teacher. To better understand her perceptions by trying to help her become aware of the contradiction I was hearing, I asked her what she does when she becomes upset at school (Int p.21). She responded without awareness or acknowledgment of the apparent contradiction she was making, "Sometimes I get mad in class and sit and write about the incident or something unrelated. (I do this) to make me feel happy about something else, unless it is serious, then I will write it on paper. Usually I write some small poems, happy poems" (Int p.21). I requested to view these poems and Mary agreed to bring

them to me later the same day. The poems never materialized. This point of contradiction will be discussed later in this chapter.

Once more I attempted to help her see the discrepancy between what she said and what she said she did by reading to her the samples of written work she had given to me (Int p. 21). The entries were descriptions of herself and her current feelings about the troubles she was having with her classmates and teacher (ww p.13,14). The descriptions reflected her sadness and hurt at the teachers' expectations and consequences she was facing for avoiding her assigned written work and losing her Antigua report notes. The entries were clues that Mary did use her writing to tell others of her inner thoughts and negative feelings about what was going on. She freely shared the examples with me and told me she planned on sharing them with her teacher who caused her to feel the way she felt (Int p.21). She did share the written work that expressed her feelings about the incident with her teacher. After doing this she revealed to me that this helped her to feel better about the problem "because now at least I know that she (teacher) knows how what she did made me feel" (Int p.23).

As she said in her interview (Int p.21) she shares what she wrote in an attempt to communicate to the other person what is going on and how it is affecting her. The person with whom she shares the most is "usually her mom" (Int p. 21) but also, sometimes includes the other individual with whom she has problems.

As our discussion of her writing and her use of writing continued over the weeks, I believe she became clearer about the helpfulness of expressing one's self through one's writing. She demonstrated her understanding of this in the final interview after the second and final Q-sort was complete. When asked why she placed the statement, "I think writing is a great way to express how I am feeling about something", in the column titled "Most Like Me", for an ideal author (ideal Q-sort p.13) she told me why it is

important that an author be able to express one's self. "Being able to express the self makes better writing, better ideas, words and thoughts" (Int p.33). When asked why she placed the statement, "I think writing is a great way to express how I am feeling about something", in the column titled "Most Like Me", for herself as a writer today she had a personal reason (real Q-Sort p15). Her response was "because I *actually* (italics added) do this with thoughts about my brother and sister and real dad" (Int p.33). The emphasis on the word actually intrigued me and I questioned her more about this by asking, "Why did you emphasize the word "actually" in that last answer?" (Int. 33) She said she made the emphasis because most of the other cards talked about things of which she doesn't do too much. For example, "I don't rewrite much, or edit, you know, so that one I do do a lot so I put it there" (Int p.33).

In an effort to understand how she began to use writing in her life outside of school I asked an open question during the interview. "How did you get started writing to express yourself?" Mary replied, "Well, my mom gave me a diary so I started that way and my teachers have taught us about journal notebooks as a way to express my self so I just do that at home" (Int p.34). I saw this statement, along with the other comments she made, Q-sort placements she did, and written work samples she submitted, as indicating that Mary perceived writing as a way to express herself and used this form of writing in her life to help her to solve personal conflicts.

Rewriting Contradictions

An interesting point that I noticed as I looked at both Mary's and Chris's responses about rewriting, (both interview and Q-sort), and their actual performance was that I saw both consistency and contradiction. Much of what they said to me in the interviews and Q-sorts was supported by what they did in the classroom. On the other

hand, some of what they said and did was contradictory. This was most evident in the area of rewriting.

To begin with, both participants placed the Q-sort statement card, "I rewrite my writing several times." in the sixth column titled "Very Much Like Me" on the initial Q-Sort, Ideal (Q-Sort p 5, Q-Sort p 7). This initially revealed to me that the students saw rewriting as a necessary characteristic of an ideal author. On the initial Q-sort, when the students were asked to sort the cards to tell how they perceive *themselves* as writers today, Mary placed the card saying she "rewrites her writing several times" in the column titled "Very Much Like Me", and Chris placed the same card in column 1, titled, "Not Like Me At All".

As the students' special education teacher, I had seen their writing strategies since the beginning of the school year. As I looked back through collected pieces of their work and talked with their classroom teacher, I discovered that rewriting was something that neither student had done yet (obs p.18-1). They had both edited written work in the past , i.e. spelling check, grammar check, but neither had rewritten parts for fluency, order, details, structure, or clarity.

Mary's Rewriting Contradiction

The perception and the reality of the rewriting strategy for Mary, at least, are not consistent. I thought perhaps that this could be a confusion in the use of the word, "rewrite". To clarify this with Mary I asked her to tell me in her own words what rewriting meant. I asked her to tell me how she rewrites a paper. She explained her version of how she does this: "Well, first, I read the paper and then I fix the parts by changing the words that are spelled wrong and I change parts that don't make sense."(Int p.21) This sounded like my definition of editing so I further probed her definition by asking how she makes those parts make sense. She said, "I think again about how I want

it to sound and sometimes I read it to someone else to get some help."(Int p.21) This told me that Mary can define editing but may not be as clear on what rewriting is. In addition, this told me that Mary thinks she knows what editing and rewriting are. She thinks she edits and rewrites when, in fact, she does not. As her teacher, I found out by looking back through the grade book (obs p. 18-1). I then explored how her perceptions could be so different from reality. I attempted to do this by asking her to include the initial copies of her written work as well as her final draft. She agreed to do that from that time on and I conveyed this intention to her teacher, who agreed to see that this happened in the daily teachings. Unfortunately, she did this only once and claimed she lost each draft or that some papers didn't need another draft. The one time she did rewrite was for the report on Antigua (ww. p21,22,23,28,29) in which she made few changes in word choice, but did make some structural changes in the order of paragraphs on the first page (ww p.21, 28). These drafts were encouraged by the teacher and teacher's assistant and at one point became mandatory before she could attend a recess. I became interested to see if her perceptions of herself as a rewriter would change if we discussed this reluctance to do the re-writing. To do this I asked her about likes and dislikes of writing wondering if she would mention rewriting as a dislike (Int p.23). My question was, "What do you dislike about writing?" She said, "Not really anything, maybe a sore wrist." She did not mention anything about rewriting. To try to get more information from her about rewriting, without implying what I was looking for in her answer, I asked her if she had rewritten any pieces since our last interview. She replied with a simple, "No", and went on to discuss another writing project (Int p.23). I continued to discuss rewriting in our interviews to keep the idea in her mind as her writing experiences came and went throughout the six-week data collection process.

At the final Q-Sort she sorted the card that says she rewrites her writing several times into the column marked "Sort of Like Me" for the real sorting and "Very Much Like Me" in the ideal sorting. This placement is the same as the initial Q-sort placement for the ideal sorting. In comparison to the initial real Q-Sort however, the final Q-Sort placement of the card that says "I rewrite my writing several times" moved from "Sort of Like Me" to "Very Much Like Me". In order to understand her perceptions of this change, in the final interview that followed the final Q-Sort, I asked her about why the card moved slightly. Her response, "I think rewriting helps to make unclear parts better and clearer, then if you just leave it the first time you can go back and use better words or ideas or more details" (Int. p34), gave insight into her understanding that rewriting has value in the writing process; however, she gave no indication she was aware of how little she uses it.

Mary's response to what rewriting is seems more like what she does, make simple mechanical changes, than the definition she gave of rewriting in the beginning of data collection. I had Mary listen to her Antigua report as I read it aloud (Int p.24). Her report was unclear, confusing, and grammatically unreadable at times. She said she wouldn't have changed anything about it and simply complimented herself on the parts she liked about Christopher Columbus (Int p.24). This student's perception did not match reality. As a result of hearing her interpretation of her written work, I assumed that Mary, with her own understanding of the purpose of rewriting, thought her writing made sense and that was why she didn't rewrite. Another possibility was that she was unable to use the definition she understands in her writing process.

Happy Poems

In the earlier section titled, "Mary's Rewriting Contradictions", I referred to some poetry that Mary stated she wrote, called "happy poems" (Int p.21). In an

interview with Mary she was talking about writing she does at school to help her handle conflicts she has. During that interview I asked her "What do you do when you get mad at school?" (Int p.21) At the time I was asking her this, I was attempting to help her see that she writes more often and about more things than she was telling me she did. Up to that point she told me her only writing was about her brothers and sisters and the things they do to upset her (Int p.21). Mary's response to what she does when she gets mad at school was, "Sometimes I get mad in class and sit and write about the incident or something unrelated to make me feel happy. Unless it is serious then I will write it on paper. Usually I write some small poems, happy poems"(Int 21). Immediately following her response I asked her why she would write happy poems while she was mad at something. She replied, "Like I said, it is unrelated so it makes me feel happy to think about something else for a while"(Int p.21). I followed her response with requesting to see her happy poems and she happily agreed (Int p.. 21). Over the next few weeks I reminded her often to share with me her poems. I never received them from her which made me think they do not exist. As the year came to a close I continued to ask her for them and unfortunately, I did not ever get to read them.

Chris' Rewriting Contradiction

During the initial real Q-Sort on March 26, 1998 Chris placed the card statement, "I rewrite my writing several times" in the column titled, "Not Like Me At All". During the same session but for the ideal writer Q-Sort Chris placed the same card in the column titled "Sort of Like Me". "I don't rewrite anything I write, at home or at school. I think that rewriting would make my writing better but I don't do it. I understand that rewriting is important for good writers that's why I put that card there. But I hate to do it. I hate writing the first time so I don't want to write more" (Int p.18).

While I was writing his response down, Chris followed up with, "I do rewrite sometimes, like I rewrite songs with funny lyrics".(Int p.18). When I reread this interview later that same day this answer led me to think that Chris may not have the same definition of rewriting as I do as a teacher at this school. Rewriting to me is the act of reading a piece of already written work and deciding what does or does not make sense. When I find such parts I change the word choice or word order until I feel it makes more sense. Rewriting is making content changes and editing is making grammatical changes. To determine what Chris has as a definition of rewriting I asked him in an interview a week later, on April eighth, "What do you think rewriting is?"(Int p.22) He defined it as "You go back and rewrite what you don't like or what you think should be changed" (Int p.22). I wanted to know more about how he does this so I asked him how he would decide if a part makes sense or not. He explained that he would know "if it says what I wanted it to say or if you don't think it does then you change it" (Int p.22). In an attempt to get him to tell me more specifically what he does to make writing make more sense, I read to him his response to a question from the second interview about making writing make sense. He told me, in that earlier interview, that it is important that writers rewrite "cause people need to understand what they're writing so they know what they are trying to say, otherwise the reader would get lost"(Int p.18). In the third interview I asked him, "How does a good author/writer get writing to makes sense so that the reader doesn't 'get lost' ?" He answered, "They make it so the words are all in order so you can follow the story. They change the words around after rereading a part that does not make sense until it does" (Int p.22).

I wanted to help Chris to see how he was talking about rewriting in terms of others doing it. I asked him what he could do to make his writing make sense. He said he could "go back, and reread my writing and rewrite parts that I find that don't make

sense"(Int p.22). I asked him to do that this next week with a piece of writing of his choice. He agreed. At our next interview on April 22, I asked him if he had rewritten anything. He said he had rewritten his report on Argentina. "I made some changes to parts that don't make sense, some parts I had written the same words twice" (Int p.22). This seemed to me to be more like editing and not rewriting.

In Chris' final real Q-Sort, his placement of the card, "I Rewrite Only When it is Required", moved in a direction indicating that he perceived himself to rewrite more at the end of the six-week period than at the beginning. His card placement moved from "Very Much Like Me" to "Not at All Like Me" (Q-Sort p.11,19). I asked him about his perception of rewriting only when it is required and the fact that the card was placed differently in the initial and final sorting. He explained why this has happened in his perception as, "Because I want it to be good-I want it to get a passing grade, try hard, make it best, rewrite it, if it needs it-So my grades have to be good to do summer things like visit my mom, go to World's of Fun with my dad and step-mom, do church activities like go-carts, and archery"(Int p.32).

As I was reading the Q-Sort placement data and the interview responses Chris gave in regards to rewriting, I looked to my observations and written work samples and found one sample that showed two submissions of the same piece (ww p.4,10). These two pieces were submitted separately the same day and are exactly the same.

Alpha-Smart Usage

As of October of the 1997-1998 school year, both Mary and Chris had full time access to the Alpha-Smart Pro personal computer (Alpha-Smart). Both students began using it at school and at home for written language learning assignments. Right from the start the number of assignments the two students used the Alpha-Smart differed. Chris used his for every written language assignment including spelling lists and tests, reports,

short answer responses, journal entries, lists, essays, poetry and letter writing. Mary used her Alpha-Smart only for long written language assignments, like reports or short stories. Mary continued to use her own handwriting for spelling lists and tests, letter writing and journal entries. One look through the data collection notebook confirms this observation. Chris's work samples are entirely done on the Alpha-Smart (ww p.3,4,10,19,20 and 24-26). Mary's are done almost entirely handwritten with the exception of her long report on Antigua (ww p.1,2,5-6,7-8,15,16,17,18,21-23, exception is ww p.28-29).

Chapter 5: Discussion and Conclusions

Through the use of a Q-Sort, interviews, observations and written work samples I collected data with the purpose of understanding written language learning disabled students' self-perceptions as writers. Data pieces that appeared in at least three of the four data collection sources were reported as discoveries in chapter four. The four discoveries were (a) writing for self-expression, (b) rewriting contradictions, (c) happy poems, and (d) Alpha-Smart Usage. This chapter is a discussion of my beliefs about the discoveries of this study. The discussion is followed by a section containing implications for educators as well as a discussion of implications for further research.

Writing for Self-Expression

Mary wrote with the purpose of expressing herself. She used writing for the purpose of dealing with problems she experienced at home and at school. I found this interesting because of the written language learning disability she has. Usually, a student with a learning disability is not motivated to use the part of themselves that is disabled. The lack of motivation is a result of past failures in the area of the learning disability (Chapman, 1988). Since Mary did not completely lack motivation for writing I feel she had found an internally motivating reason to continue to use writing in her life.

I attribute this motivation to the teachers who Mary said taught her about the use of journals and to her mother who taught her bought her a diary. Because of her teachers' and mothers' actions, Mary was exposed to a way to use writing that was not graded by anyone. She did not have to feel frustrated by writing structures and grammar rules when she wrote to express herself. The freedom this created allowed Mary to continue to use writing despite her learning disability.

Chris used writing as needed for assignments and occasionally for humor. He did not indicate through data collection methods that self-expression was a manner in which he wrote.

Rewriting Contradictions

In a study funded by the United States Office of Special Education Programs, researchers sought to discover the computers impact on learning disabled students' writing. They also sought to determine if the learning disabled student could learn to use the computer to develop their writing skills (Morocco & Neuman, 1987). The research discovered through standardized test scores, teacher ratings and written work samples that learning disabled students use of strategies were impacted by the computer in a range of levels. The strategies they were searching for in the students writing was recall of information, oral expression, generation of ideas, revision, spelling, fluency, and motivation. The results indicated that most students can learn to use the computer if the computer is combined with proper instruction. The researchers suggested "procedural", step-by-step instruction from a teacher to instruct the learning disabled students how to use the computer to develop their writing.

In a study to determine how the computer impacts the revision of students with learning disabilities, McAllister and Louth investigated how computers impact such writers with and without combined teacher and computer instruction of revision and rewriting. The results suggested that the students with the combined instruction of revision showed marked improvement in the area of rewriting. The investigator credits the computer for the improvement since the control group received the same teacher instruction without the computer (McAllister & Louth, 1989).

Grandgenett, Lloyd and Hill (1990-1991) suggest similar implications as a result of their investigation into learning disabled students writing with and without the

computer as a tool. The results of their study led them to suggest that a combined instructional method of lecture and hands-on computer usage is the best way in which to improve learning disabled students' writing.

The participants in this study both were able to tell me approximately what revision means. However, neither student used revision in their writing. Both students claimed to have used revision in their writing. However, except for some minor editing, the students did not revise their work. I found there to be three possibilities for this.

One possibility was that the students struggled so much with writing the first draft of a written work that writing it a second time or making major changes to it was overwhelming. A second possibility was that they did not see their writing as needing changes. When I read both students' reports aloud to them and asked how they felt about the work they both replied that they liked their work and would not have changed much about it at all. In my opinion as a teacher I felt the reports were unclear and unorganized. In their own self-perceptions the students may have thought the work was well done. The third possibility was a lack of true instruction about how to use the revision process. It is possible that the students understood what revision was in words but not in actions. In a study titled "Knowledge of revision and revising behavior among students with learning disabilities," 26 junior-high subjects' knowledge of revision consisted of editing errors. Less than half of the revisions were rated as improvements to the paper (MacArthur, 1991). This tells me that learning disabled students may not have received step-by-step instruction in how to revise that they can understand and apply.

Happy Poems

Mary told me she writes happy poems in school when she gets upset. She said she did this to help her think about something else that was good. Mary offered to let

me read some of the poems she wrote. I never received the poems. I asked her several times for them and she said she had them and would bring them to me at a later time. Other written work samples, prior to the poems, were offered freely to me by Mary. This led me to believe that she either did not write the poems or that she did not want to share them with me.

Alpha-Smart Usage

Much research has been conducted to support *how* technology is a key part of education *and* what it can provide to students. Woodward foresees the impact of computer education to be powerful, "By the year 2000, the major way of learning at all levels and in all subject areas, will be through the interactive use of computers (Woodward, 1992). Since technology is already so integral in many classrooms in the country, research has been done to indicate the impact computers have on education. Results of studies have told us that computers are able to provide individualized instruction, give immediate feedback to students, explain answers, show infinite patience and be non-judgmental (Coley, 1997). Coley suggests also that computers allow for independence and challenge.

Because of such reports, I assumed the Alpha-Smart would be powerful in assisting the participants' writing. As Chris's teacher I saw a dramatic improvement in Chris's work that he submitted from the Alpha-Smart as opposed to his handwritten work. This was primarily due to the new legibility of his work. His handwriting was so poor before the introduction of the Alpha-Smart that we were unable to determine his understanding of the assignments. Despite the positive influence the computer was having, Chris only mentioned the use of the Alpha-Smart to me once throughout the entire school year. In November of 1997, before the onset of data collection and a couple months after providing him the use of the Alpha-Smart, I asked Chris about his opinion

of the Alpha-Smart. His answer was powerful enough that I wanted to document it in his file for his parents and teachers to read. I asked Chris, "Do you like using the Alpha-Smart?" Chris replied with a simple "Yes." I asked him "Why do you like the Alpha-Smart?" Chris answered, 'Because I am faster at it and when I write my letters to the ship captain (class project) I know he is actually going to be able to read them instead of trying to figure out what they say." I responded to that powerful statement with "WOW! That must make you feel really good!" to which he said, "Oh Yeah!" and smiled (obs p.18).

The fact that *that* was the only mention of the Alpha-Smart through out the entire school year, including the study time, suggests two possibilities. One possibility is that he did not view the Alpha-Smart as a valuable tool that contributed anything new to his writing. The second possibility is that the Alpha-Smart made an impact on the students that they did not perceive. The questions I asked about their writing may not have caused them to think of the mechanical aspect of the writing tool but rather the content and purposes of writing only.

Summary of Discussion

As the researcher of this study and the special education teacher for the students I found the results of this study to support the research done in the past on computer usage in the classroom. Both participants experienced the improved grammar and spelling experience as was discovered in so many research studies (Morocco & Neuman, 1987; NCIP, 1994a; NCIP, 1994b; McAllister & Louth, 1989; Grandgenett, Lloyd & Hill, 1991). A positive regard for written work was also described as a result of using a computer for assignments ((Storeygard et al., 1993). Chris experienced happiness in a new found tool that allowed him to turn in work that looked more his age level as a result of using the Alpha-Smart.

As a result of not asking the students to compare themselves to others, I believe the students were able to discuss themselves in a positive light. Past studies on self-perceptions of learning disabled students compared the students to other non-learning disabled students. The results of such studies indicated that the self-perceptions of the learning disabled student were lower and more negative than those of the non-learning disabled students (Chapman, 1988; Rogers & Saklofske, 1985; Heyman, 1990; Grolick & Ryan, 1990; Black, 1974; Priel & Leshem, 1990; Renick & Harter, 1989). This lower and more negative self-perception has a direct link to motivation which in turn affects the academic performance of the student in a negative manner (Chapman, 1988; Rogers & Saklofske, 1985). In this study the students were not compared to other non-learning disabled students and therefore focused on their abilities and strengths.

In conclusion, the study discovered some findings that were similar to and supported some past research. Also some new findings were discovered. The new findings may have emerged as a result of studying the same topic of interest, self-perceptions, through a different study design, qualitiative. My proposal to discover more about self-perceptions through a different study design showed itself to be useful as it allowed me to uncover the idea that learning disabled students self-perceptions are low when compared to other non-learning disabled students, however, when they wer not compared to others as in this study they were able to portray positive self-perceptions about their writing. Therefore, I assert that using a qualitative design to investigate a topic of predominatly quantitative past studies alowed for infomation to be uncovered that might not have otherwise been found.

Researcher Reflections

In addition to gaining a deeper understanding of the self-perceptions as writers of the students who participated in this study I learned more about the research process. I

also learned how the discoveries connected to the literature review, how the information gained from this study influenced my teaching practices and what I could have done to improve the study. This section is devoted to describing these other benefits of the study.

Conducting and reporting this study has taught me about aspects of research that will continue to be used in my career as a teacher and researcher. I have learned about credible researchers such as Bogden and Biklen (1982), and about the intricacies of two study designs, qualitative and quantitative. The most powerful research information gained from this thesis has been a deeper understanding of the need to conduct a thorough review of the literature which will lead to the questions that still need to be answered. Once a question has been determined a study design can be chosen based on the kind of information looking to be discovered and the best way to uncover that information. Finally, I have learned that any research done accurately and honestly is valuable to the larger body of knowledge that already exists.

Conducting this study led me to obtain information that will be valuable in my teaching career. As a dedicated educator, I am always searching out resources to improve my own abilities which should, in turn, positively impact my students. The results of this study opened my eyes to valuable information that I can use to more specifically individualize my instructional plans. I found that understanding each child's self-perception can allow me to develop lesson plans that will more accurately reflect the students understanding of their own strengths and weaknesses. If my lesson plans are created with such knowledge in mind I can be more confident that the student and I are starting at the same place each time we begin our work together.

I will further use the data I collected about the Alpha-Smart Pro's impact on the student. Although the students did not verbalize the positive affect the Alpha-Smart

had on their writing, as their teacher I was able to confirm that the Alpha-Smart did improve the mechanical aspects of their writing, including legibility, increased length of papers, and spelling.

The results of the study added some new ideas to the already existing information available in the literature review. I found that the students described themselves in a positive manner which contradicted results of past self-perception studies. The positive self-perceptions given by the participants may have been because the study did not ask the students to compare themselves to non-learning disabled students. I also found that the results founded in the past research on the impact of the Alpha-Smart on students writing were consistent with what occurred with the participants of this study.

The use of the qualitative design in this study may have allowed the students to possess positive self-perceptions. I assume this because past studies consistently used the quantitative design along with comparison tests and found learning disabled students to have negative self-perceptions about themselves as students.

Upon completion of this study I have taken some time to reflect on what I could have done to improve the study. One of the ways I could have improved the study was to do some meaning verification with the participants prior to the initial Q-Sort administration. I did conduct a pilot Q-Sort administration with different students to assure that the students understood the intended meaning of the Q-Sort statements and organizer column titles. I could have gone through the same process with each participant prior to the card sorting. This would have given more credibility to the Q-sort and assured the reader the students were sorting cards they understood the meaning of. If I had done such an administration the reader could also discount misunderstanding or lack of understanding as a variable.

I could have improved the study by deepening my own knowledge of the writing process and how learning disabled students learn. Having further knowledge beyond my own, from my undergraduate and graduate course work as well as from experience being a teacher and working with students and writing, may have allowed me to probe more completely the responses I gathered from students during the interviews and Q-Sorts. Being able to probe the responses further would possibly have allowed for more thorough understanding of the participants self-perceptions and understanding of their own writing processes.

Implications for educators

As a result of what I was able to discover about these two students as I searched to understand the self-perceptions as writers I have some suggestions for educators. I believe that writing should be taught in a variety of different uses of writing in mind. Simply using writing for academics was not a positive use of writing for Mary but using it as a means of personal self-expression was. Teachers should talk about and share the many different uses of writing so that all students are able to find a use that they will adopt into their daily practices. Further I would suggest that students who have a verified written language learning disability be assessed to determine if the physical writing process of holding and writing with a pen is the cause for poor academic written performance. If it is determined to be a factor, other options should be made available. For example, the use of technology, personal computers, classroom computers and verbal dictation can be integrated into the students curriculum. Those students who struggle with writing may do so because of lack of real understanding of revision. I think teachers should teach revision in a hands-on, step-by-step manner so that it can be determined that the students not only can tell you what revision is but can also apply it.

Finally, lessons taught in how to interpret constructive criticism need to be incorporated into the writing process. The students I worked with became withdrawn and angry when asked to revise. This was usually do a lack of understanding of revision and the student may have thought they were being asked to rewrite the entire paper. The intense difficulty for a learning disabled student of writing an initial draft needs to be respected. However, by definition, learning disability means having the intellectual potential to learn at an average or above average level. Because of this teaching revision strategies to learning disabled students should be accompanied by guided assistance but not ignored.

As a special education teacher I make modifications and accommodations for students with written language learning disabilities. For example, when a written assignment was required for assessment, the general classroom teacher and I created an alternative method to assess the students' understanding of the material. We made these modifications because otherwise it would not be a fair assessment of the students' knowledge if they were unable to communicate their comprehension to us as a result of their learning disability. It is my belief that removing the requirement of writing from the student is both helpful and harmful. It is harmful in the respect that the students are robbed of an opportunity to use writing. In Mary's situation if she had not been exposed to the opportunity of journal and diary writing she may not have used writing at all, except when required . Because she was exposed to writing choices and she found one choice useful in her life she was able to enjoy writing without the frustration of being graded poorly. I would suggest that we as educators need to provide a variety of writing styles to students with written language learning disabilities so that writing, although difficult, remains a positive part of the students' lives.

A further implication for educators is that of teaching rewriting/revision strategies. I would suggest that students with written language learning disabilities need step-by-step instruction as to how to use such a strategy. Teachers need to provide many opportunities to practice rewriting their work using the step-by-step strategy. Learning disabled students need to be taught how to recognize what needs revision and when written work is ready to be a final copy as well as the steps in between. If this step-by-step instruction begins early in the students educational career then sixth grade students would be accustomed to using rewriting strategies and will have become proficient at it.

Another implication for educators is that as a part of teaching about revision to written language learning disabled students, teachers should teach how to accept constructive criticism. During this school year as the participants' teacher, I would suggest ways to improve their work and the students would become frustrated. The participants rarely rewrote their work so the frustration I created was pointless. If written language learning disabled students could learn to revise well and learn a step-by-step strategy that was efficient for the participants then the students may not become frustrated and refuse to revise. Being taught this skill would allow them to grow as writers without causing more anxiety.

Implications for Further Research

After completing this study I would suggest that the area of revision in written language learning disabilities needs to be researched further. Specifically, I would recommend research into *why* written language learning disabled students do not rewrite and what happens if written language learning disabled children are taught early in elementary education how to rewrite.

The review of literature provided information regarding learning disabled students and revising their written work (McAllister and Louth, 1989; Kurth and Stromberg, 1994). I would suggest that information regarding *why* learning disabled students don't rewrite their work needs to be understood. I would suggest from the literature that motivation is a possible factor but it is not an established factor in the area of revision (Chapman, 1988; Rogers and Saklofske, 1985; Heyman, 1990; Grolick and Ryan, 1990; Black, 1974; Priel and Leshem, 1990; Renick and Harter, 1989).

If step-by-step instruction is provided for written language learning disabled students beginning early in elementary school it would benefit teachers to know the long term effects this has on individuals with learning disabilities. It is not certain whether the participants attribute the Alpha-Smart to any of their positive self-perceptions of their writing. I agree with Woodward who suggested that future research focus on "lower achieving" students and the use of the Alpha-Smart would be helpful and useful(1992).

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Appendix A

Q-Sort Statements

Administration = Ideal - first, Real - second

8 Mechanics of Writing Statements (M)

8 Thoughts and Feelings of Writing Statements (T)

(M) 1. My writing flows in an order that makes sense to the reader.

(M) 2. My writing makes sense.

(T) 3. My writing flows better now than when I was younger.

(T) 4. My writing makes more sense now than when I was younger.

(M) 5. When I write I make a plan.

(M) 6. I rewrite my writing several times.

(M) 7. I do not rewrite my writing at all.

(M) 8. I rewrite my writing only when it is required for an assignment.

(T) 9. Most of the time I write because I want to.

(T) 10. I write because an assignment is given.

(T) 11. I think writing is a great way to express how I am feeling about something.

(T) 12. I think writing something down is a great way to tell others what I need or want.

(M) 13. I think it helps me to write a better paper if I write a rough draft first.

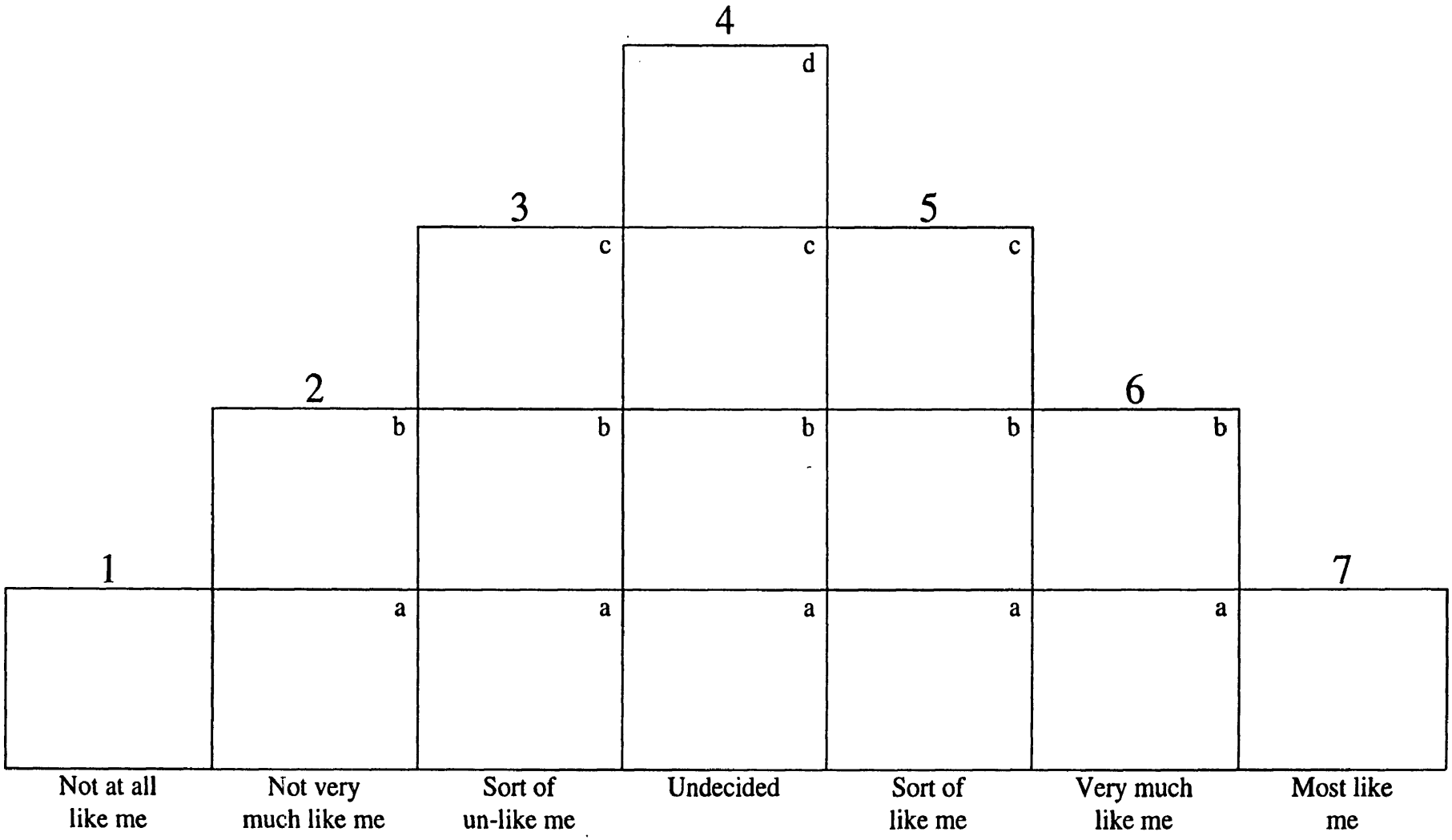
(M) 14. I do not edit my writing at all.

(T) 15. I think I am a good writer.

(T) 16. I think other students would enjoy reading what I write.

Appendix B
Q-Sort Organizer

Name_____
Ideal or Real
Date_____



Appendix C
Q-Sort Distribution Form

Name_____
Ideal or Real
Date_____

Category	Students placement on Q-Sort Organizer Column #
<u>Mechanics</u> "M" card numbers	
<u>Thoughts & Feelings</u> "T" card numbers	

Appendix D

Interview Questions

Normal font indicates structured questions. Italic font indicates a spontaneous question. Name next to a question indicates it was asked only of that person. If no name appears the question was asked of both participants.

Interview 1

1. What do you think of yourself as a writer today?

Why do you write about them as opposed to telling them or just remembering them? Mary

2. What are the strengths of your writing?

Is your own life getting scarier? Mary

What do you mean by "stronger"? Tell me more about that word. Mary

3. What are your weaknesses as a writer?

4. How do you feel when you are assigned a writing project?

Why is something more exciting than something else to write about? Mary

Why did you pick the topic you did for your last report? Chris

5. What kinds of writing do you do?

Anything else? Chris

6. Where is your favorite place to write?

Do you keep anything you write? Chris

Interview 2

1. Re-read (Summarized) the participants responses to last interview questions. Is there anything you wish to add or change about your response?

2. Talk to me about how you feel about writing the country report you are working on in class.

OK. What else? Chris

Would you prefer to write your report at home or at school? Chris

3. What have you written since we last talked?

Are there any thoughts or ideas on your head that if you would have had time you would like to have written down? Chris

4. Since we last talked has writing or your thoughts about writing changed at all?

In your opinion has your writing gotten better or worse since we last talked? Chris

Why is writing it more clear to the other person than talking to them? Mary

Do you think you go slower when you write? Is that what makes it clearer? Mary

Why do you think you take the time to write slow and clear at home but at school you avoid writing and then hurry through it? Mary

5. Why did you put card (11t Mary) (7M Chris) as Most like me (real) and card (5M Mary) (2M Chris) as most like you (ideal)?

6. Why did you put card (10T Mary) (6M Chris) as Not at all like me (real) and card (8M Mary) (2M Chris) as Not at all like me (ideal)?

7. Why did you place card (2M Mary) (15T), here (col. 4 Mary) (col 4 Chris)?

If you had more space where would you have put it?

8. Why did you place card (15T Mary) (6M Chris) in (col 4 Mary and Chris)?

How do you think you could find out if you are a good writer? Chris

Do you decide for yourself or do you think you have to give them to someone else? Chris

Which is more important, your opinion or others' opinions? Chris

What do you think the difference is between rewriting at home and at school? Chris

Interview 3

1. You said you write to express your feelings. How often do you write to express your feelings? Mary

What do you mean by a lot? Mary

What do they do to hurt your feelings? Mary

Is that the only thing you write about is your brother and sister and their hurting of your feelings? Mary

2. I received three pieces of your written work from you in two days last week. Is that a normal amount of writing for you to do in a day or two? do you usually write more or less? Mary

What do you do when you get mad at school? Mary

3. Do you usually share your "feelings" that you write as you did with me? Who do you share with or do you keep it private? Mary

Why do you want to share? Mary

What does rewriting mean to you? Mary

How do you rewrite a paper? Mary

1. What do you think rewriting is? Chris

How would you decide is a part makes sense or not? Chris

2. How does a good author/writer get his writing to make sense so that his reader doesn't "get lost"? Chris

3. Why is the statement, My writing makes sense, "Not at all like You"?

4th Interview

1. What do you like about writing?

Why?

2. What do you dislike about writing?

Why?

3. Have you rewritten any writing pieces since we last talked?

How do you think that *that* effected your writing piece?

4. I would like to read your report aloud to you. After hearing it....

What do you think of it?

What would you keep/what do you like about your report?

Why?

What would you do to make this better?

Interview 5

1. In your opinion, what do you think happens when a teacher gets your papers/written assignments after you have turned it in?

What do you think she grades it for?

What do you think a teacher assigns written assignments for?

2. If you know that someone is going to read your written work do you do anything different? (as opposed to something you write that you know no one will read)

What if someone wants to read your work for a grade, do you do anything different?

What if someone wants to read your work for pleasure?

Do you do anything different?

3. Do you feel safe to write anything you are feeling or thinking or creating?

Why or why not?

Do you think authors feel safe to write what they want to?

What does "safe" mean to you?

How did you get started writing to express yourself? Mary

6th Interview-Mary

Follow-Up to Final Q-Sort

Questions relating to the *Ideal* Q-Sort:

1. Why did 11t move from column 6 (initial) to column 7 (final) ?Mary

2. Why did 2m and 15t (star cards) stay in Undecided (column 4) both times you sorted the cards? Mary

3. Cards 12t, 5m, and 11t are all placed in column 6 and 7 in both Q-Sorts. Mary

Why do you think you placed these cards here both times? Mary

4. Card - My writing Flows. - moves from Not at All to Undecided (Initial to Final).

What do you think has happened to make you undecided about how your writing flows? Mary

Questions in regard to the Real Q-Sort:

1. Again, the star cards, 2m and 15t are in the same column.

Why do you feel they did not move in the Q-Sort? Mary

2. The card that says , My writing makes more sense now than when I was younger, moved from sort of like me to Sort of Unlike me.

Why do you think you chose this? Mary

3. Tell me about your choice of placement of card, 11t, both times you placed it in the Most like me position. Why do you think this is most like you? Mary

In what ways, times and places do you use writing to express yourself? Mary

What do you mean "Actually"?

4. Card 5m, I make a plan before I write, is in the same spot each time. It is in column 6, very much like me, this is a strong statement that says you do this most of the time.

Tell me about the plan that you make. Is it written, thought, etc.? Mary

5.(connected to previous question) Card 13m, making a plan before writing makes a paper better, moved up from Undecided to Sort of Like Me. What is your opinion of how making a plan makes a paper better, and how you use this idea in your writing. Mary

6. 6m, rewriting makes a paper better, moved from 6 back to 5. Why did this move for you? Mary

7. *Why did you start writing to express yourself on paper? Mary*

6th Interview-Chris

Follow-up to Final Q-Sort

Questions regarding Ideal Q-Sort:

1. Says 2m is "most like" an ideal author both times he sorted the cards. Why is the card you think is most like a great author? Chris

2. 15t, I am a good writer, is undecided both times. Why do you think a great author is undecided about what he thinks of himself as a writer? Chris

Questions regarding Real Q-Sort:

1. When I write I make a plan jumped from Undecided to Most like me. Tell me about this. What kind OF plan? Chris

2. I don't rewrite my writing at all moved down from Most like me to Sort of Like me. What does this say about your writing and rewriting? Chris

3. STAR CARD I think I am a good writer (15t) moved up from Undecided to Sort of like me. Why do you think your opinion of your writing has changed over the weeks? Chris

4. STAR CARD My writing makes sense moved up from sort of unlike me to Undecided. Why do you think your writing makes more sense than last time we talked or why do you think you are "decided" about your writing now but you weren't then? Chris

5. 8m, I rewrite only when it is required moved!! from Very much like me to not at all like me!!!!!!(reflection: says he perceives himself to rewrite even when it is not required, there is no evidence of that.) Chris

Appendix E

Rule 51

006.04J Specific Learning Disabled

006.04J1 The MDT shall include at least:

006.04J1a The child's regular teacher(s);

006.04J1b A special educator with knowledge in the area of specific learning disabled;

006.04J1c A school psychologist; and

006.04J1d A school district administrator or a designated representative.

006.04J2 The team may not identify a child as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of:

006.04J2a A visual, hearing or motor handicap;

006.04J2b A mental handicap;

006.04J2c A behavioral disorder; or

006.04J2d Environmental, cultural or economic disadvantage.

006.04J3 In order for a child to be verified as specific learning disabled the child must demonstrate a severe discrepancy between achievement and intellectual ability in one or more of the major areas listed in 92 NAC 006.04J3c. The evaluation shall include the analysis and documentation of:

006.04J3a The observation and documentation of the child's academic functioning, educational environment, and the child's interaction with that environment (basic psychoeducational processes) in the regular classroom, conducted by at least one team member member other than the child's classroom teacher;

006.04J3b The results of an individual test of intelligence. The child shall score above the minus one (-1.0) standard deviation point, full scale I.Q. on an individual test of intelligence. If there is a discrepancy of more than one (1.0) standard deviation between major composite scores, the higher score may be used as the indicator of the child's intellectual ability.

006.04J3c The results of the child's assessed ability level. The child's standard score in one or more major area(s) must be at least 1.3 standard deviations below the child's assessed ability level (20 standard score points). In addition, the standard score(s) in the major area(s) which is used to establish the qualifying discrepancy(ies) shall fall at or below 90 standard score points regardless of the discrepancy between assessed ability level and the major area(s). Discrepancies shall be verified in terms of standard score units rather than age or grade equivalents. The major areas are oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, mathematics calculation and mathematics reasoning.

006.04J4 Particular attention shall be devoted to the technical adequacy of all instruments employed including the reliability of results, validity for the purposes employed, normative samples and applicability to the child being assessed.