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ABSTRACT

This report describes the outcomes of a one-year federally funded pilot study of 14 students with low vision or blindness (grades 3-6) and 13 teachers. The study was designed to generate practical classroom assessment procedures for measuring "learned helplessness" and recommendations for a conceptual intervention model for use in the classroom. The students were enrolled in programs for students with visual impairments at the Arizona School for the Deaf and Blind or the Tucson Unified School District. The first section of the report describes learned helplessness and details the project's objectives and research methodology. Attached appendices discuss the results of five individual studies. Research findings include: (1) the Dweck Effort/Ability IAR Subscale may identify mastery oriented and learned helpless response patterns among students with visual impairments; (2) state school students with visual impairments had higher expectations of succeeding on different tasks; (3) the students tended to reduce persistence time on task after failure, but there were no significant differences among students in different placements; and (4) state school students consistently attributed their success on tasks to factors such as personal ability, while public school students saw ability and effort as equally important causes for their success. (Contains 60 references.) (CR)

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LEARNED HELPLESSNESS IN CHILDREN WITH VISUAL HANDICAPS: A PILOT STUDY OF EXPECTATIONS, PERSISTENCE, AND ATTRIBUTIONS

FINAL REPORT

Principal Investigator: Dr. Dan Head
Project Director: Dr. Margaret Pysh
Senior Research Investigator: Dr. James Chalfant
Research Assistant: Rebecca Spencer

Edited by Joshua Madden and Sherill Rogers

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LEARNED HELPLESSNESS IN STUDENTS WITH VISUAL HANDICAPS: A PILOT STUDY OF EXPECTATIONS, PERSISTENCE, AND ATTRIBUTIONS

FINAL REPORT

Principal Investigator: Dr. Dan Head
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TABLE OF CONTENTS

Appendix G - Study Four: Attributions for Success and Failure

Appendix H - Study Five: Teacher Interviews

Appendix I - Expectancy of Success Line

Appendix J - Dweck Effort/Ability IAR Subscale Items

Introduction

Blind and visually impaired students experience unique learning problems and have difficulty functioning efficiently and independently in classroom settings. While personal, social, and academic problems are not an inevitable result of visual impairment, these students' earliest learning often begins a cycle of restricted mobility and limited experiences resulting in the passivity, dependence and poor self-concept observed in visually impaired students and adults (Head, Bradley, & Rock, 1990; Kirk & Gallagher, 1986; Martin & Hoben, 1977; Wright, 1960).

Though the specific relationship between cognitive-motivational factors and achievement is not known, it is widely accepted that these factors do influence learning and personal adjustment (Ames & Ames, 1984; Bloom, 1976; Dweck, 1986). Difficulty and repeated experiences of failure are inescapable for visually impaired students, and repeated failure experience has been hypothesized to result in the cluster of maladaptive behaviors labeled "learned helplessness" by Seligman (1975).

The Learned Helplessness Syndrome

Seligman (1975) originally presented the "learned helplessness" hypothesis as a model for explaining the debilitating consequences of experiences perceived as not personally controllable. The reformulated helplessness model added causal attributions to the original concept. "We argue that when a person finds that he is helpless, he asks why he is helpless. The causal attribution he makes then determines the generality and chronicity of helplessness deficits as well as his later self-esteem" (Abramson, Garber & Seligman, 1980; Abramson, Seligman & Teasdale, 1978).

For normal-achieving students, Dweck (1975) and Dweck & Licht (1980) identified two major types of responses to failure. For some normal students, failure facilitates performance. These students respond to failure experience by increasing their efforts, showing greater concentration and persistence, and attributing success to personal ability and failure to lack of effort. These students are referred to as "mastery-oriented." For other normal students, referred to as "learned helpless," failure appears to be devastating and results in a severe disruption of performance, decreased effort, and lowered persistence. These students use poorer problem-solving strategies, expect to fail, and attribute their failures to a personal lack of ability. When these students are successful, they perceive their success as unexpected, unusual, "a fluke," or a result of task ease. They do not attribute success to their own ability. The most interesting aspect of this research is the pretest comparability of the groups. Before failure experience, the groups show identical speed, accuracy, and problem-solving strategy sophistication (Dweck, 1975, 1986; Dweck & Licht, 1980; Dweck & Repucci, 1973). Studies have shown that a student's beliefs about the causes of success or failure are important mediators of performance; that is, that they affect persistence in the face of failure and influence expectancies for future success (Dweck, 1975, 1986; Dweck & Repucci, 1973; Frieze & Snyder, 1980; Garber & Seligman, 1980; Pysh, 1982; Weiner, 1985a, 1985b).

The Visually Impaired and Learned Helplessness

Many of these "learned helpless" characteristics have been observed in visually impaired students and are explained by the dependency caused by visual impairment and the reaction of others to this disability. Initially, visually impaired students must be almost totally

dependent on their parent(s)/ guardian(s) for assistance, interpretation and reinforcement. The parent must become a substitute for the more natural visual information system. This substitution affects the visually impaired student's self-concept, and his/her feelings of self-worth become strongly linked to parental attitude and acceptance (Sommers, 1944; Barraga, 1983).

Additionally, many parents, peers and teachers respond to the visually impaired student by becoming overprotective and excessively helpful, which interferes with learning and independence (Bauman, 1973; Bradley-Johnson, 1986; Kirk & Gallagher, 1986). Frequently, decisions are made for the visually impaired student without his/her consultation. This deprives the child of another opportunity to explore options and develop and practice independent decision-making, a necessary step toward building a sense of "control" and strong self-esteem.

The passivity commonly observed in visually impaired students is presumably a result of lack of visual enticement for exploration and/or a feeling of ineffectual control over the environment (Barraga, 1983; Bradley-Johnson, 1986). Since eye contact is not possible, visually impaired students lack another area of experience where other students commonly exercise "control" over their social interactions (Tait, 1972).

> To offset the forces that tend to reduce social/adaptive competency, parents [and teachers] of children with visual handicaps may have to concentrate on mediating all interaction with the environment. More efforts may have to be made to structure social experiences and tasks in which the child can learn and receive positive feedback (Head, Bradley, & Rock, 1990).

Little research exists on the cognitive-motivational aspects of visual impairment. In general, those studies that have been done found greater dependency and submissiveness in

visually impaired students (Warren, 1984). Early studies by Barker, Wright, Myerson and Gonick (1953) found mixed maladjustment among the visually impaired. Sommers (1944), Jervis (1959), Zunich and Ledwith (1965), Head (1979a, 1979b), and Head et al. (1990) found visually impaired students were no different from the sighted on self-concept scales; while other researchers found the visually impaired less well socially adjusted than their sighted peers (McGuinness, 1970; Schindele, 1974). Petrucci (1953) found blind high school students were 22% more submissive, 71% less self-confident, and 73% less self-sufficient than sighted peers on a personality inventory task. One of the more interesting studies in this area was Land and Vineberg's (1965) research on blind students' locus of control. Blind students in State School and public school settings had fewer internal feelings of control than normal students, i.e., the blind students perceived themselves to be less "in control" of their life events. Tuttle (1984) observed visually impaired students were often unwilling to initiate actions they feared might be wrong. The experiences of many students with visual handicaps may predispose them to question the degree of control they can exercise over events and outcomes in their lives (Head, et al., 1990). McAndrew's early research (1948a, 1948b) found visually impaired students were more sensitive than sighted students to their failure to reach previously estimated levels of aspiration. Jervis and Haslerud (1950) found blind adolescents verbalized more intropunitive (self-deprecating) remarks in response to a frustrating puzzle than did sighted peers. Blind and visually impaired students have also been found to keep attention more frequently turned inward on themselves rather than outward toward the world (Tait, 1972).

The blind student often perceives the sighted student as functioning much more

effectively, and attributes self-failure to the visual nature of the task requirement. This leads to the visually impaired student's mistaken belief that sighted students make fewer mistakes and perform at a higher ability level (Parsons, 1987). Teachers who work with visually impaired students report that these students perceive themselves as "not having control over their actions or their environment."

As Obaikor (1986), and Obiakor and Stile (1989), point out, most "self-concept" research on the blind has used a "vague definition of the construct" (p. 255) and they recommend an "area-specific" approach to the study of self-concept, i.e., researching self-knowledge, self-esteem, and self-ideal as they relate to: physical maturity, peer relations, academic success, and school adaptiveness. Warren (1984) recommends "... the dynamics that influence aspects of self-concept [in visually impaired students] are complex. It would seem desirable to study these variables from both the inventory approach ... and the behavioral approach (i.e., observing behavioral indicators of aspects of self-concept)" (p. 256).

School Tasks and Learned Helplessness

Teachers of the visually impaired have special education techniques to address the primary educational problem created by visual loss; that is, the teaching of compensatory, disability-specific skills, i.e., Braille, or orientation and mobility. Though teachers of the visually impaired are concerned about students' "self-concept," little sound research exists to guide the teachers of blind and visually impaired students in identifying and successfully intervening in these secondary but often devastating cognitive-motivational aspects that affect learning, such as: low expectations of success; lack of motivation and persistence on tasks;

poor self-concept; destructive attributional beliefs; and the view of the self as helpless.

In the 1970's and 80's, a number of studies on the cognitive-motivational aspects of achievement (self-esteem, locus of control, inactivity, and learned helplessness) were conducted on learning disabled students and poor readers. Most of these studies found some evidence of expectations of failure, poor persistence, destructive attributional patterns, and generalized negative self-perceptions (Butkowsky & Willows, 1980; Chapman & Boersma, 1979; Licht, 1983; Rogers & Saklofske, 1985; Torgesen & Licht, 1983; Winne, Woodlands, & Wong, 1982). Do visually impaired students show this "learned helpless" syndrome? Do they expect to fail, lack persistence, believe that success was "a fluke," and attribute failure to a lack of personal ability? Do visually impaired students in a State School setting show more or less "learned helpless" characteristics than visually impaired students in integrated public school settings?

Perhaps some visually impaired students have a double, or second handicap. They may have "learned" not to believe in themselves and their ability to succeed, and have ceased making a strong effort. If so, theoretically, these maladaptive patterns should result in decreased performance, lessened motivation, and a poorer self-concept than would be possible with a "mastery-oriented" attitude toward themselves and their visual impairment.

It has been demonstrated that effective intervention treatments for "helpless" students can result in greater persistence and better future performance (Andrews & Debus, 1978; Borkowski, Weyhing, & Carr, 1988; Dweck, 1975). Research has been needed to systematically observe, identify, and analyze visually impaired students' expectations, reactions

and beliefs. The research described in this Final Report was necessary before an adequate research-based diagnostic and remedial intervention model could be designed for optimizing visually impaired students' responses to "challenges," persistence in the face of difficulties and beliefs in their own abilities.

Project Purpose

There were three major purposes for this one-year pilot study. First, to adapt or develop practical assessment instruments that could be used by teachers to measure the "learned helplessness" syndrome in visually impaired students. Second, to use the assessment instruments to describe the "learned helplessness" syndrome among blind and visually impaired students in State School and integrated public school settings. Third, to develop a conceptual intervention model for classroom use by teachers of the visually impaired to affect maladaptive cognitive-motivational characteristics identified. Additionally, the results of this pilot study will be used to assist in preparing a follow-up three-year intervention study for blind and visually impaired students.

Project Outcomes

Expected outcomes of this one-year pilot grant were: a) an in-depth literature review of procedures for the assessment and intervention of the "learned helplessness" syndrome (Appendix A); b) the development of pilot assessment instruments and procedures to measure the symptoms of the "learned helplessness" syndrome among blind and visually impaired students (Appendices B & C); c) a comparison of self-responsibility, expectations, persistence, and attributions among blind and low vision students in State School and integrated public school settings (Appendices D-G); d) a description of the characteristics of

blind and low vision students' beliefs about expectations for success or failure, persistence in the face of difficulty or failure, and attributional beliefs about the causes of their success or failure (Appendices E-G) and e) a description of teachers' opinions, beliefs, and perceptions toward teaching visually impaired children (Appendix H).

Project Objectives

Each of the nine research project objectives was fully met in a timely fashion and will be fully described in the accompanying appendices or subsequent sections of this document. The project staff encountered no difficulties in any areas, allowing the research team to adhere to the proposed plans of operation and evaluation without deviation.

The specific objectives and outcomes for the project included the following:

1.0 Administrative Start-Up

- 1.1 Employed qualified graduate student and secretary using University of Arizona Affirmative Action procedures. (August - September 1990)
- 1.2 Met with Arizona State School for the Deaf and Blind (ASDB) and Tucson Unified School District (TUSD) administrators to arrange for research sites. (August - September 1990)
- 1.3 Set date, time, and place to orient school faculties to the project. (August - September 1990)
- 1.4 Began monitoring and evaluating project activities for progression, effectiveness, and efficiency. (August 1990)

2.0 Select Students and Teachers

2.1 Met with ASDB and TUSD liaisons to review files of prospective target students for the study and apply selection criteria for identification. (November - December 1990)

2.2 Selected and assigned the target students to be included in the study. (December 1990 - January 1991)

2.3 Contacted the parent(s) to obtain written permission for their child to be included as a student in the study. Replaced target students as needed. (December 1990 - January 1991)

2.4 Contacted the teachers of prospective target students to confirm their willingness to participate in the project. (December 1990 - January 1991)

3.0 Conduct Literature Reviews

3.1 Surveyed the literature for assessment instruments and procedures. (August 1990 - June 1991)

3.2 Reviewed relevant articles. (August 1990 - June 1991)

3.3 Surveyed the literature for intervention strategies. (September 1990 - February 1991)

3.4 Reviewed relevant articles. (September 1990 - February 1991)

3.5 Generated a conceptual model for intervention. (March - July, 1991)

4.0 Develop Assessment Procedures and Instruments

4.1 Analyzed assessment instruments and procedures that were identified. (November 1990 - February 1991)

4.2 Adapted or developed instruments and procedures for use with the visually impaired such as observation and interview procedures for students and teachers, and student performance instruments. (October 1990 - March 1991)

4.3 Interacted with Statistical Research Consultant during the development of the instruments and procedures. (August 1990 - August 1991)

5.0 Field Task, Revise, and Validate Assessment Techniques

5.1 Provided reliability training to all research staff who would administer the assessment instruments and procedures. (February 1991)

5.2 Scheduled and administered assessment instruments and procedures to the target students. (February - May 1991)

5.3 Analyzed the results and revise instruments and procedures as needed. (March - May 1991)

6.0 Collect Student Measures

6.1 Administered pre-task instruments (December 1990 - March 1991, May 1991)

6.2 Conducted student observations. (March - May 1991)

6.3 Administered student performance instruments. (April - May 1991)

6.4 Conducted student interviews. (April - May 1991)

6.5 Established an ongoing relationship between participant observers and student. (December 1990 - May 1991)

7.0 Collect Teacher Measures

7.1 Completed teacher (classroom) observations. (March - May 1991)

7.2 Completed teacher interviews. (January - April 1991)

8.0 Score, Analyze, and Interpret Data

8.1 Developed and refine coding and scoring procedures. (March - July 1991)

8.2 Trained project staff for reliability in scoring. (March - July 1991)

8.3 Scored and analyzed student and teacher data using quantitative and qualitative data analyses procedures. (June - August 1991)

8.4 Interpreted the results. (June - August 1991)

9.0 Dissemination of Results

9.1 Prepared reports. (June - December 1991)

9.2 Wrote articles and prepared presentations for dissemination. (June 1991 - continuing)

Methodology

This section provides a description of the project design, selection of students and research sites, methodology for each of the four phases (Instrument Development; Field Tasking of Prototype Assessment Instruments; Data Collection; and Data Scoring, Analysis, and Interpretation), and includes changes made during the project period. See Table 1.

TABLE 1

Research Design for Study

PHASE 1	PHASE 2	PHASE 3	PHASE 4	
Instrument Development	Prototype Field Task Procedures/Instruments	Data Collection	Data Scoring & Analysis	
			Qualitative	Quantitative
Student Observation Procedures	Field Task	N = 14	x	x
Teacher Observation Procedures	Field Task	N = 13	x	
Student Performance Instruments	Field Task	N = 14	x	x
Student Interview Procedures	Field Task	N = 14	x	x
Teacher Interview Procedures	Field Task	N = 13	x	
	Revise Assessment Procedures and Instruments as necessary			

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Overview of the Project Research Design

This one-year pilot project was designed to generate practical classroom assessment procedures for measuring "learned helplessness" among blind and visually impaired students; document the characteristics of the "learned helplessness" syndrome among visually impaired; and generate recommendations for a conceptual intervention model for use in the classroom. The results of this pilot study have provided the assessment techniques needed to describe the characteristics of "learned helplessness" among the visually impaired. A subsequent three-year study is still planned to develop, field task, and validate intervention strategies for altering student expectations for failure, measuring persistence time on difficult tasks, and developing more accurate attributional beliefs among the visually impaired.

A qualitative study was conducted simultaneously with the instrument development, data gathering and analysis, and interpretation phases of the quantitative study. For the qualitative study, there was extensive data gathered through a participant observer approach. In all cases a researcher established a relationship with a single student by working as a tutor in learning situations and associating as an acquaintance during occasions such as lunch breaks. These data were collected and analyzed continuously, in the usual ethnographic analysis style, with the information gleaned from one encounter suggesting further information probes for future encounters. The methods described by Erickson (1986), frequently used as guidelines for qualitative analysis, provided direction for the analyses in this study. There were no formal interviews or standard instruments employed in the qualitative part of the project; rather, the researcher associated with each student became a

participant observer in the student's educational program. This close association provided data on how the student responds when encountering a difficult learning task, resulting in data that were free from the student's attempts to give socially desirable responses.

Because students who were assessed in the quantitative data gathering portion of the project were the same students who were in the qualitative portion, there was ample opportunity to converge the information from the two types of research. Thus, the interpretation of the data benefitted from the two approaches; that is, each approach provided evidence with which to investigate the validity of the other.

Selection of Students

Students were selected based on availability for extensive participation more than for representativeness of a population to be assessed. Because this was a developmental project, it was necessary to have cooperation from students to a degree far beyond that which is required to obtain "norms" for student behavior. Thus, no random sampling was utilized. Rather, the students at both sites were studied to determine those who would be available for most in-depth study. From the students who were available, the goal was to select a sample to represent the variety of blind and visually impaired students in these settings.

Because the goal was to describe both blind and visually impaired students in two types of settings, an attempt was made to select five students for each cell of a two-by-two table with the variables (1) impairment: blind versus low vision, and (2) setting: integrated public school versus self-contained (See Table 2).

Students for this pilot study were 14 low vision and blind students in grades 3-6,

diagnosed and enrolled in programs for the visually impaired at the Arizona School for the Deaf and Blind or Tucson Unified School District. Ten visually impaired students were selected from each site program. The commonly accepted legal definition of "blindness" is 20/200 in the better eye with corrective lenses or a field restriction that subtends an angle of 20 degrees. This definition is more specific than either the federal educational guideline of "a visual impairment which even with correction, adversely affects a student's educational performance" (the term includes both partially seeing and blind students); or the existing State of Arizona guidelines which state "visually handicapped means a student who has a vision

TABLE 2

Research Design for Study

	Blind (n = 6)	Low Vision (n = 8)
State School (n = 8)	5	3
Public School (n = 6)	1	5

deviation from the normal, as determined by evaluation pursuant to Section 15-766, which impedes his educational program in the regular classroom situation without the support of special classes or special services designed to promote his educational development, and whose intellectual development is such that he is capable of being educated through a modified instructional environment."

For this research project, a low vision group (with visual acuities between 20/200 and the ability to count fingers at 3' or greater) and a blind group (whose visual acuities range from the ability to count fingers at 3' or less to an inability to perceive light) were selected. These two groups have distinctly different visual abilities and experiences.

Students were required to meet certain criteria regarding grade level, intelligence, and disability. Visually impaired students were in grades 3-6 and within one year of appropriate chronological age for that grade. Dweck (personal communication, 1980) explained her selection of upper elementary age students for their sufficient language level to follow task directions, some degree of naivete about task manipulation, and comfort in sharing their thoughts. Rosenholtz and Simpson (1984) indicate that by second grade, students' estimation of ability correlates with actual performance. Intelligence was within the average range on verbal intelligence quotients. This eliminated retardation or giftedness as a variable. Finally, visually impaired students were selected who were not multiply handicapped, i.e., have any identified handicapping condition other than their visual impairment. This restricted confounding variables for data interpretation. Because of the extremely low prevalence of visually impaired students, the number of students included was small.

This study was designed to examine the cognitive-motivational characteristics of the

visually impaired population in both a State School setting (Arizona School for the Deaf and Blind) and a public school integrated setting (Tucson Unified School District), because existing research results vary on the self-concept and motivational characteristics of the visually impaired child in various learning environments. McGuinness (1970) found visually impaired students served by itinerant and integrated programs more adjusted than those in special schools, while Schindele (1974) and Head (1979a, 1979b) found no differences in self-concept between State School and integrated visually impaired students. Insufficient research exists to make generalizations concerning the differences, if any, between the specific cognitive-motivational aspects of visually impaired students in integrated or State School settings.

Description of Participating Schools & School Districts

The Tucson Unified School District is a large metropolitan school district in Tucson, Arizona, which serves approximately 55,000 students and encompasses an area of over 200 square miles covering the major portion of metropolitan Tucson, portions of two Native American Reservations, and Davis-Monthan Air Force Base. The entire spectrum of social-economic status is represented within the district. The ethnic breakdown of students is approximately 2% Asian American, 4% Native American, 6% African Americans, 34% Hispanic, and 54% other.

The Arizona School for the Deaf and Blind serves students and youth with sensory impairments throughout Arizona and is the only special needs school of its kind in the state. The component for the visually impaired is staffed by 15 appropriately trained and certified teachers, one counselor, three orientation and mobility specialists, one principal and one

director. Services are provided to 74 students and youth with visual handicaps in grades K-12, many of whom reside at the school during the school week. The school draws students from all geographic areas of the state and is composed of students representing a wide range of socioeconomic status. The ethnic breakdown of students is approximately 1% Asian American, 3% African American, 16% Native American, 32% Hispanic, and 47% other.

PHASE ONE: DEVELOPMENT OF INSTRUMENTATION

The development of instrumentation began with a literature survey to identify procedures and instruments that might be adapted or developed for use with the visually impaired. Project staff and consultants analyzed instruments to make this determination and any necessary adjustments. When needed procedures and instruments could not be adapted, they were developed. Examples of instruments included: Student Observation Techniques; Teacher Classroom Observation Techniques; Student Performance Instruments; Student Interview Techniques; and Teacher Interview Techniques. The method for developing the instruments and the model was similar to the approach used in the development of many standardized tasks for which Dr. Darrell Sabers, the project's statistical consultant, has been the consultant. As items and approaches were being developed, the investigators observed the students' performance on the instruments to gain information on the process of assessment as well as the product of the assessment. For example, in the development of the Bracken Basic Concept Scale (Bracken, 1984), students were viewed examining the picture stimuli without the instructions to determine whether there was anything in the pictures that allowed the student to select the keyed response without knowing the stimulus word. In the

development of the Clinical Evaluations of Language Functions (Semel & Wiig, 1980), author Elisabeth Wiig gathered detailed responses from students to review with the consultant and editorial team. In all cases, the research teams examined the evidence of successive versions of the instruments until satisfied that the desired construct is explained and measured. In these examples, it is careful examination and repeated trials rather than full-scale statistical analysis that produce the drafts of the final instruments. Statistical data become essential in the final stages of development and norming of a task; however, at the initial stages, the in-depth analysis of a smaller number of students is more common and valuable.

PHASE TWO: FIRST AND SECOND FIELD TASK AND REVISIONS

The procedures and assessment techniques that were developed during the Development Phase were field tested on two occasions: during the instrument development phase and after Phase Three: Collection of Teacher Data.

1. Training in Assessment and Data Recording Procedures

From January through March, 1991, Drs. Head, Pysh, and Chalfant standardized observation and interview procedures for target students and teachers, as well as for administering student performance tasks and data recording. Group replication training occurred until staff presentations were systematic and precise.

2. Field Task Procedures and Instruments

In February, the initial field task of prototype procedures and instruments was field tested on four students: two who were placed in the State School, and two who were in public school integrated settings during 50% or more of the school day. A second field task

was conducted on 14 students and 13 teachers between March - May 1991 with the procedures and instruments that were revised in February.

3. Analyze Results and Revise Assessment Techniques

In March - July 1991, staff analyzed the procedures for administering the instruments by jointly debriefing each examiner for each student observed, interviewed, or tested. Problems were noted with respect to the administration of the instruments and the recording of data. The necessary revisions were made and the data scoring procedures were analyzed.

PHASE THREE: COLLECT STUDENT AND TEACHER DATA

The revised prototype assessment procedures and instruments for student performance, classroom observations and interviews of 14 students and 13 teachers was conducted between March and May 1991. Table 3 presents a design for collecting data which includes assessment measure categories and sources of the data.

1. Administer Pre-Test Instrument

The Dweck Effort/Ability IAR Subscale (Diener & Dweck, 1978, 1980) was selected as the pre-test measure of internalized self-responsibility for academic performance of the visually impaired students. Refer to Appendix D for a description and summary of methodology, results, discussion, and implications of the data.

2. Conduct Student-Teacher Observations

Observers were trained in observation techniques prior to data collection. Observer training employed videotapes of students to practice recording of student behavior. Observers compared their recording of information to help establish as much consistency and

replication as possible. Student interviews were conducted in March - May 1991. Teacher observations were conducted in February and March 1991.

3. Administer Student Performance Tasks

Performance tasks which measure expectations, persistence, and attributional beliefs were administered in April - May 1991 (Appendices E-G). Staff was trained in assessment techniques for consistency and replication of procedures.

TABLE 3

Research Design for Data Collection Phase

	SOURCES OF DATA		
	Students:		Teachers
Assessment Measures	State School	Public School	
Classroom Observations	N = 8	N = 6	N = 13
Interviews	N = 8	N = 6	N = 13
Performance Tasks	N = 8	N = 6	

Three different tasks were specifically chosen to create two different kinds of success and failure experience. The anagrams represented an "academic-like" task which was perceived by the students as similar to reading and spelling in school. This perception of similarity to reading tasks should result in expectancies and attributions more in concert with those evoked

by genuine reading activities. The anagrams were chosen to be sufficiently novel to be motivating and could be made to appear soluble when, in fact, they were not. Anagrams are a commonly used task for testing attributions and learned helplessness theory (Weiner, 1979, 1985a, 1985b; Seligman, 1975).

The line drawings/puzzles were chosen to provide a nonacademic, novel, apparently soluble task to see if expectancies, attributions, and persistence would vary from an "academic-like" task (anagrams). It was thought that puzzles were sufficiently similar in nature to line drawings to allow them to be used by the students who were blind and unable to make the visual response required of the line drawing task.

Anagrams

The anagrams used were three, four and five-letter words randomly reordered and Brailled or typed in large print on 5 x 8 index cards and placed in separate envelopes. None of the anagram words contained Braille contractions or short forms. All the soluble anagrams were formed from uncontracted Braille words fond in basal reader lists at the first, second, and third grade reading level. The insoluble anagrams were created by changing one letter of the soluble anagrams. Anagrams and direction for administering the anagram tasks are provided in Appendix B.

The anagram task requires the students to look at a sequence of printed or Brailled letters and attempt to rearrange the letters to form a word. This is a complex task which requires the same kinds of inter-sensory abilities required of reading. Students must discriminate the differences and similarities of one alphabet letter from another within the

anagram. Visual or tactile memory is necessary for recognizing different patterns or configurations of letters in the anagrams which may form recognizable words, and for rearranging sequences of letters in the anagram to form meaningful word units.

Line Drawings

The line drawings were geometric forms within squares, based on those used by Weiner (1979, 1985a, 1985b) and adapted by Butkowsky and Willows (1980). The insoluble forms were not discernible as insoluble to the naive student. Each bold line drawing was placed on an individual 8 1/2 x 11 sheet of paper and placed in an individual manila envelope. Bold line drawings and directions for administering the line drawing task are provided in Appendix B.

The line drawing task is a visual-perceptual motor task which requires the students to trace the outlines of printed figures without recrossing any line. This task primarily requires visual-motor integrative abilities. Students must be able to plan and execute the necessary motor patterns for tracing. Fine motor coordination is required to hold the marker, trace the lines of the figure, and make directional changes.

If the students perceived the anagrams as academic tasks, and the line drawings (puzzles) as nonacademic, then there could be great differences in the expectancies, attributions and performance. Throughout testing the students seemed to perceive the tasks as different, with anagrams being perceived as "like reading."

Puzzles

The puzzles used were geometric forms in two, three and four parts. The insoluble

forms were not discernible as insoluble to the naive student. Each disassembled puzzle was placed on the table before the student; puzzle designs and directions for administering the puzzle task are provided in Appendix B. The puzzle task is a motor task which requires the student to tactually explore the parts (puzzle pieces) and to create a whole image (geometric shape). This task requires tactile-kinesthetic integrative abilities.

Students must be able to tactually recognize the individual part as a component of a larger whole. Fine and gross motor coordination skills are required to examine each piece and place the pieces into a template which was capable of holding the completed puzzle form. As with the line drawing task, students were expected to perceive the puzzle as a nonacademic task, different from the reading like task of anagrams.

Rationale for Measuring Expectancies and Attributions

In reviewing the research methodology for measuring expectancies, multiple techniques were found for identifying attribution statements about success and failure. This section presents the rationale for selecting the measures used in this study (Appendices E & G).

Expectancies

For the present study, a large print number line from 0 to 10 was used. It was accompanied by corresponding smaller to larger black dots over the numbers and the words "All Wrong" under the zero and "All Right" under the number ten. By fifth grade, students are familiar and comfortable with a number line representing 0-10, but the graduated dots are a visual reminder of the proper direction for increased expectancy. The words are helpful to those whose reading is sufficiently good and the simplicity of the words makes it accessible

to almost everyone. See Appendix I for Expectancy of Success Line. This procedure was successfully pilot tested with five students. For those students who were Braille readers, a Brailled version of the number line was employed.

Attributions

Because the most common and accurate causal attributions for students at various ages have not yet been determined, it was decided that an open-ended technique followed by a structured multiple-choice technique would result in the most accurate reflection of the causal explanations students usually use (Frieze & Snyder, 1980). Testing revealed that after having responded to the open-ended technique, the structured multiple-choice procedure seemed to give students assistance in explaining their original open-ended responses. This reverified the examiner's interpretation of the original open-ended responses. Students' open-ended responses were typically consistent with structured choices. The students seemed to incorporate the structures language provided, subsequent open-ended questioning.

Procedural Steps for the Experimental Group

Because of the multiple-step nature of this research design, the description of instructions and procedures has been arranged in the exact sequence in which they were given to each student. The specific procedures, directions, and tasks resulted from a literature search, personal communications with Dweck and Licht (1980) and Butkowsky and Willows (1980), and the pilot testing with five fifth and sixth grade students at State School and local educational agencies in the area from which the experimental sample was drawn.

The procedures for conducting the study are divided into steps. The purpose of the

sequence of steps for the experimental groups are described in this section as outlined in Figure 1.

The purpose of these steps was to assess the student's initial expectancy for success proceeding the experimental trials, to provide success or failure experiences for each child, to obtain data on the performance of students on soluble and insoluble tasks, and to assess students' attributions.

Step One - Introduction

The student was given a preliminary explanation of an anagram or line drawing/puzzle task. The student was told for anagrams:

> I want you to help me find out how kids your age do on a reading task. It looks like this. (Sample soluble anagram shown to child.) I will be giving you cards with scrambled up letters on them. I want you to use all letters on the card to make one word.

The child was given the following explanation for line drawings:

> I want you to help me find out how kids your age do on a task. This is what it looks like. (Sample soluble line drawing is shown to the child.) When I ask you to start, I want you to connect all the broken lines of the puzzle without lifting your marker and without going over any line twice. It doesn't matter if you stay exactly on the line and the lines don't have to look pretty.

Figure 1
Experimental Groups Procedural Outline

Step

1. Introduction
2. Initial Expectancies for Success or Failure
3. Introduce the Demonstration SOLUBLE Item
4. Present the SOLUBLE Task
5. Determine Attributions for Success or Failure
6. Future Expectancies Following Success
7. Present the INSOLUBLE Task
8. Determine Attributions for Failure
9. Future Expectancies Following Failure Experiences
10. Present the SOLUBLE Task
11. Future Expectancies Following Success Experiences

The child was given the following explanation for puzzles:

> I want you to help me find out how kids your age do on a puzzle task. Each puzzle will have general pieces for your to put together to complete the puzzle.

Step Two - Initial Expectation for Success or Failure

Following this explanation, the student was shown the large print or Braille number line (see Appendix I) with 0 marked as "All Wrong" and 10 marked as "All Right." Then the child was told:

> Before we start, I'd like you to tell me how you expect to do on this task by picking a number from 0 to 10 on this number line. If you are sure you are going to get the (word) puzzles all right, circle a high number like 9 or 10. If you're sure you're going to get them all wrong, circle a low number like 0 or 1. If you think you'll get half of the puzzles right, circle a number in the middle like 5. (Numbers pointed to by experimenter.) Do you understand? 10 means you'll get the puzzles all right for sure, and 0 means you'll get them all wrong.
>
> Because seeking expectancies prior to each trial can affect performance on persistence tasks, expectations were sought only before each series of tasks (Dweck & Gilliard, 1975).

Step Three - Introduce the Demonstration SOLUBLE Item

Place the anagram in front of the student and say: I am placing the first word puzzle in front of you. I want you to read the set of 5 letters and use all 5 letters to make one word. Work on the puzzle you finish it or no longer wish to work on it. Once you put the puzzle aside you can't go back to it. You may use your braille writer or scratch paper. Show me when you are finished by writing and saying the word "FINISHED". You may begin.

I am placing a puzzle in front of you. You are to connect all the broken lines of the puzzle without lifting your marker and without going over any line twice. It doesn't matter if you stay exactly on the line and the lines don't have to look pretty. If you want to start over, ask for another copy of the puzzle. Once you have put a puzzle aside, you can't go back to it. The two rules are: You must connect all the broken lines without lifting your marker and you can't go over any line twice. Tell me when you are finished or no longer wish to work on the puzzle. You may begin.

Place the intact puzzle in front of the student and say: I am putting a puzzle in front of you, "Feel this" (the name of the object is not given). The student feels the intact puzzle.

Guide the student's hand if necessary. Remove the piece(s) from the puzzle. Place the piece(s) in the holding box and say: "Now, you feel it". Part is missing. The student feels the puzzle template and the examiner says: "The missing piece is next to the puzzle." Guide the students hand and let the student handle the missing piece. "I am going to put the pieces of the puzzle together and complete it." The student feels the completed puzzle. Disassemble the puzzle. Place the piece in the holding box and say: "Now, you do it." If student fails, give a second lower level soluble puzzle.

Step Four - Present the SOLUBLE Task

A. Anagram Trials - Each student was given one envelope containing one anagram. Timing began when the student removed the card from the envelope. Timing ended when the student said the word asked to go on to the next puzzle, or began to put the card back in the envelope.

B. Line Drawing Trials - Each student was given one envelope at a time containing one line drawing. Timing began when the student removed the puzzle from the envelope. Timing ended when the student said he was finished, lifted his pencil in a gesture of completion, or started to put the puzzle back in the envelope.

C. Puzzle Trials - When I ask you to start, I am going to give you more puzzles to complete. You are to work on each puzzle until you finish it or no longer wish to work on it. Once you have put a puzzle aside you can't go back to it. Show me when you are finished by saying "FINISHED". Then, I will give you another puzzle. The examiner disassembles the soluble puzzle for the student. Place the pieces(s) in the holding box and say: "I am placing a puzzle in front of you. The missing pieces of the puzzle are in the box at the side." If necessary guide the student's hand to the template or to the holding box and say: "Complete the puzzle by putting the pieces together. You may begin". Begin timing. Allow the student to attempt to complete the puzzle until he/she either succeeds or stops trying. If they are still trying after 5 minutes, say: "Let's try another one" and give a second lower level soluble. Give a maximum of 5 minutes per puzzle.

Step Five - Determine Attributions for Success or Failure

The fifth step was intended to obtain data on the experimental student's beliefs about the causes of success or failure following repeated soluble or insoluble trials (Appendix G).

Attributions were sought by open-ended and structured techniques. For the open-ended success attributions, the child was asked immediately following the repeated soluble trial experience: "Why do you think you did well on this task?" For the open-ended failure attributions, the child was asked the following repeated insoluble trial experience: "Why do

you think you had trouble with this task?" Each child's answer was recorded and rated by two independent evaluators into attributional categories.

Following the open-ended attribution choice measurement, each student was presented with five cards. One attribution statement was printed or Brailled on each 5 x 8 index card. The cards were placed in random order in front of the child. The cards read:

Success Cards	Failure Cards
I am good at this. [ability]	I am not good at this. [effort]
I tried hard. [effort]	I could have tried harder. [effort]
It was an easy task. [task ease]	It was a hard task. [task difficulty]
I was lucky. [luck]	I was unlucky. [luck]
Because of other reasons.	Because of other reasons.

The experimenter pointed to each card and the student was asked: "What do you think caused you to do (not do) so well on these puzzles? Do you think you did (did not) do so well because you are (are not) good at this (ability), because you tried harder (could have tried harder) (effort), because it was an easy (a hard) task (task difficulty), because you were lucky (unlucky) (luck), or because of other reasons? Point to the card or cards which say why you think you did (did not) do so well on this task".

After the child selected a card, the experimenter asked "Any others?" No child was forced to select more than one card, but multiple choices were permitted to reflect the multiple determinacy of events in achievement situations (Butkowsky & Willows, 1980).

If the child selected the card for ability, effort, task, or luck, he was asked a further question to clarify the specific versus global attribution dimension.

This technique was adapted from Butkowsky's recent unpublished research (personal communication, 1981).

Step Six - Future Expectancies Following Success

This step provided an index of the student's expectancy of future success on subsequent tasks. The examiner said: "Before we go on, I'd like you to tell me how you think you will do on the next puzzles. Just like before, I'd like you to tell me how you expect to do by

picking a number from 0 to 10 on this number line."

Step Seven - Present the INSOLUBLE Task

The instructions are an exact duplicate of the explanation in Step Four.

Step Eight - Determine Attributions for Failure

The procedures are an exact duplicate of those utilized in Step 5, using the statements relate to future.

Step Nine - Future Expectancies Following Success or Failure Experiences

This step replicates Step 6.

Step Ten - Present the SOLUBLE Task

This step replicates Step 4.

Step Eleven - Future Expectancies Following Success Experiences

This step replicates Step 6.

3. Conducting Student-Teacher Interviews

Consistency in interviewing procedures was accomplished by having two interviewers conduct an interview while the third interviewer observed. Following the student interviews, debriefing sessions were used to review and refine the interview procedure. Taped interviews were used to examine effective and ineffective interview techniques. Target student interviews were conducted in April - May 1991. Teacher interviews were conducted in January - April 1991. (Appendix H)

4. Participant Observation

Although rapport with students was established earlier, most of the data to be gathered for this portion of the study was obtained in January - April 1991 (Appendix H). Opportunity to integrate findings from these encounters with other data gathered from these students was

maximized by concurrent data gathered during the initial field task.

PHASE FOUR: SCORE, ANALYZE, AND INTERPRET DATA

The classroom observations and interviews of students and teachers, and the student performance data was scored and analyzed to obtain descriptive data. Data analysis began with the results of the first piloting of the first instrument and continued through the extensive analysis of the final results. During the developmental stages of each instrument, interrater and interobserver agreement was routinely assessed to determine the objectivity of the scoring of each procedure. Comparisons of blind versus visually impaired students was made continuously in an effort to understand what variables (and constructs) differentiate the two student types. Similarly, comparisons of students across sites was ongoing in an effort to understand differences; for example, to determine the effects of integrated placements versus State School placement for these students. The sample sizes available encouraged in-depth analysis of data from each student as opposed to standard statistical analysis. For example, t-tasks and analyses of variance were not as useful as "grounded description" in explaining differences between types of students and sites. There were no null or research hypotheses stated at the outset of this research endeavor. Stating prior hypotheses is more common with confirmatory projects where statistical tasks will determine whether the hypotheses are retained or rejected. As Erickson (1986) has suggested, the research questions and data collection should be in an evolving, consistent relationship, and a pilot research project has not evolved to the point where the exact hypotheses should be stated. Therefore, the general goals of this project were stated in a manner that allowed flexibility in our endeavors.

Impact

Researchers, educators, and clinicians have long recognized a relationship between a child's cognitive-motivational characteristics and his or her performance in school-related academic activities (Butkowsky & Willows, 1981; Dweck, 1986). While educators of students with visual impairments have accepted this relationship, little research had been conducted to clearly delineate the specific characteristics of learned helplessness and low self-esteem for these students (the cognitive-motivational aspects of visual impairment). Many of these "learned helpless" characteristics have been observed and described in the literature on self-concept of visually impaired students (passivity, dependence, lack of initiative, lowered level of aspirations, etc.) and are explained by the dependency caused by visual impairment and the reactions of others to this disability.

The primary importance of this research study has been to document systematically and precisely what is meant by "learned helplessness" in visually impaired students. This study supported the development of preliminary instrumentation that will allow regular classroom teachers and special teachers of students with visual impairments to assess the presence or absence of those characteristics. Given the current trends toward greater integration of the handicapped in regular education, a database on the cognitive-motivational characteristics of visually impaired students is critical so that appropriate placement decisions can be made and IEPs developed that reflect the affective needs of visually impaired students as well as cognitive and compensatory educational needs. In summary, this one-year pilot study generated critical information that has theoretical and direct educational implications for assessment, intervention, teacher training, and future research efforts regarding the development of cognitive-motivational characteristics in students with visual impairments.

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APPENDIX A

Examples of Assessment Instruments

Test:	Perception of Ability Scale for Students (PASS)
Authors:	James W. Chapman, & Frederick J. Boersma
Publisher/Distributor:	PsiCan Consulting Ltd. Box 170., Room 103 Students' Union Bldg. University of Alberta, Edmonton, Alberta Canada 1195,1202
Date:	1977
Test Purpose:	Measure of academic self-concept
Format:	70 choice-type items
Type of Score:	7 Scores: General Ability, Arithmetic, School Satisfaction, Reading/Spelling, Penmanship/Neatness, Confidence, Full Scale
Age Range:	Grades 2-6
Time to Administer:	45-60 minutes
Test Materials:	Manual, Recording Forms, Scoring Key
Psychometric Data:	
norms:	Request information from PsiCan Consulting Ltd.
reliability:	Cronbach's alpha for the Full Scale is .91, and the median alpha for subscales is .80. Full Scale test-retest reliability is .83 with median subscale coefficient of .77.
validity:	PASS yields Full Scale correlation or .49 with grade point average for 642 children in grades 3 to 6. PASS yields correlation ranging from .03 to .08 with the Piers-Harris Self Concept Scale (Piers & Harris, 1984).

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Boersma, F.J. Chapman, J.W., & Maguire, T.O. (1979). The Student's Perception of Ability Scale: An instrument for measuring academic self-concept in elementary school children. Educational and Psychological Measurement, 39, 1035-1041.

Test:	Tennessee Self Concept Scale (TSCS)
Author:	William H. Fitts
Publisher/Distributor:	Western Psychological Services 12031 Wilshire Boulevard Los Angeles, CA 90025
Date:	1955-65
Test Purposes:	Measure of self-concept
Format:	100 self-descriptive statements
Type of Score:	Counseling Form: Self Criticism Score (SC): Positive Scores (P) (including Total, Identity, and Self-Satisfaction, Behavior, Physical Self, Moral Ethical, Person Self, Family Self); Variability Scores (V) (Total, Column, and Row); Distribution Score (D), and Time Score. Clinical and Research Form: True-False Ration (T/F); Net Conflict Scores (including Acquiescence Conflict, and Denial Conflict; Total Conflict Scores; Empirical Scales (Psychosis, Neurosis, Personality Disorder, Defensive Positive, and Personality Integration, and General Maladjustment); and Number of Deviant Signs Score (NDS).
Age Range:	12 years and above
Time to Administer:	10-20 minutes
Test Materials:	two forms: Counseling Form, and Clinical and Research Form; Manual; Test Booklet; Computerized and Manual Scoring Form
Psychometric Data:	
norms:	SES data reported in test manual
validity:	Information on content validity, discrimination between groups, correlations with other measures (MMPI, Edwards Personal reference Schedule, other measures), and personality changes under particular conditions are reported in the test manual.
reliability:	Test-retest reliability coefficients of all major scores are reported in the manual. Reported NDS Score reliability in the .80 to .90 range.
References:	Fitts, W.H. (1965). Tennessee Self Concept Scale manual. Los Angeles:

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Test:	Coopersmith Self-Esteem Inventories (SEI)
Author:	Stanley Coopersmith
Publisher/Distributor:	Consulting Psychologists Press, Inc. 577 College Avenue Palo Alto, CA 94306
Date: 1981	
Test Purpose:	Self-report measure of self-esteem of school-age children, and adults
Format:	School Form; 50 self-report items; School short Form: 25 self-report items; Adult Form
Type of Scores:	School Form (6 Scores): General Self; Social Self-Pers, Home-Parents; School-Academic, Lie Scale; and Total Self Score.
Age Range:	School Form (Ages 9-15); Adult Form (Ages 16 and above)
Time to Administer:	15 minutes
Test Materials:	Manual; Recording Forms
Psychometric Data:	Technical data provided for the School Form only.
norms:	School Form: norms reported as mean and standard deviation scores; Adult Form: no norms.
reliability:	Using KR 20, internal consistency ranges from .87 to .92.
validity:	Correlation of .44 and .75 reported with the Marlowe-Crowne and Edwards Scale, respectively. Using the Lie Scale, predictive validity of reading achievement reported at .39.
References:	Mitchell, J.V. (Ed). (1985). The ninth mental measurement yearbook (Vol 1). Lincoln, NE: Buros Institute of Mental Measurements.

Test:	Anxiety Scale for the Blind (ASB)
Author:	Richard E. Hardy
Publisher/Distributor:	American Foundation for the Blind 145 West 16th Street New York, NY 10011
Date:	1966-68
Test Purpose:	Verbal measure of manifest anxiety among blind and partially sighted children and adults
Format:	78 choice-type (true/false) items read aloud by examiner
Type of score:	1 Score: Total Anxiety
Age Range:	13 to 22 years of age
Time to Administer:	45-50 minutes
Test Materials:	Manual; Item Sheet; Roll of Tickets (Ticket Method recording procedure)
Psychometric Data:	
norms:	Preliminary norms for 122 blind and partially sighted high school students
reliability:	Odd-even, split-half internal consistency reliability of .79; test-retest reliability of .75
validity:	Concurrent validity coefficient of .74 with the Manifest Anxiety Scale

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Taylor, J.A. (1953). A personality scale of manifest anxiety. Journal of Abnormal and Social Psychology, 48(2), 285-290.

Test:	Mastery Orientation Inventory (MOI)
Authors:	William M. Reynolds & Kim L. Miller
Publisher/Distributor:	Psychological Assessment Resources, Inc. P.O. Box 98 Odessa, FL 33556
Date:	In press
Test Purpose:	Measure of generalized learned helplessness in adolescents within academic settings
Format:	Revised 40-item, Likert-type 3-point response format
Type of Score:	Mastery Oriented (positive) direction, and Learned Helpless (negative) direction. This format is scored from 1 to 3, with 1 described as most of the time, 2 described as sometimes, and 3 described as almost never.
Age Range:	Adolescent age level
Time to Administer:	15-20 minutes
Test Materials:	MOI Protocol
Psychometric Data:	
norms:	Preliminary normative data available from publisher
reliability:	Internal consistency reliability of .94; test-retest reliability coefficient of .77
validity:	MOI yields correlation coefficient of .54 with the Intellectual Achievement Responsibility Questionnaire (Crandall, Katkovsky, Crandall, 1965) Total Score
References:	Reynolds, W.M. & Miller, K.L. (1989). Assessment of adolescents' learned helplessness in achievement situation: Journal of Personality Assessment, 53(2), 211-228.

Test:	Global Helplessness Rating Scale (GHRS)
Author:	William M. Reynolds & Kim L. Miller
Publisher/Distributor:	William M. Reynolds University of British Columbia Vancouver
Date:	1983
Test Purpose:	Teacher rating scale of student helplessness
Format:	Linear scale using the hundred millimeter line
Age Range:	Request information from W.M. Reynolds
Type of Score:	Scored from 0 to 100 with extreme high and low ratings indicative of mastery orientation and helplessness, respectively.
Time to Administer:	5-10 minutes
Test Materials:	Global Teacher Rating Scale
Psychometric Data:	
norms:	Request information from Dr. W.M. Reynolds
reliability:	Request information from Dr. W.M. Reynolds
validity:	GHRS yields a correlation coefficient of .52 with the Mastery Orientation Inventory (Reynolds & Miller, in press).

References:

Reynolds, W.M. & Miller, K.L. (1989). Assessment of adolescents learned helplessness in achievement situations. Journal of Personality Assessment, 53(2), 211-228.

Reynolds, W.M., & Miller, K.L. (in press). Mastery Orientation Inventory. Odessa, FL: Psychological Assessment Resources.

Test:	Students' Self-Assessment Inventory (Visually Impaired Form)
Authors:	D. Muller, D. Larned, R. Leonetti, & A. Muller
Publisher/Distributor:	Dr. Festus E. Obiakor Department of Educational Psychology/Special Education University of Tennessee Chattanooga, TN 37403
Date:	1986
Test Purpose:	Measure of self-knowledge, self-esteem, and self-ideal in the school setting
Format:	Self-report inventory
Type of Score:	12 Subscale Scores; Total Score
Age Range:	Grades 1-9
Time to Administer:	No time limit
Test Materials:	Request information from Dr. F.E. Obiakor
Psychometric Data:	Request information from Dr. F.E. Obiakor
References:	Muller, D., Larned, D., Leonetti, R., & Muller, A. (1986). The Student's Self-Assessment Inventory: Visually Impaired Form. Las Cruces, NM: New Mexico University Obiakor, F.E. & Stile, S.W. (1989). Enhancing self-concept in students with visual handicaps. Journal of Visual Impairment & Blindness, 83(5), 255-257.

Test:	Intellectual Achievement Responsibility (IAR) Questionnaire
Authors:	Virginia C. Crandall, Walter Katkovsky, & Vaughn J. Crandall
Publisher/Test Distributor:	ETS Test Collection Educational Testing Service Princeton, NJ 08541
Publication Date:	1965
Test Purpose:	Locus of control measure of internal responsibility for the success and failure of intellectual and academic situations
Format:	34 forced-choice items Scores: I- (Internal Responsibility for Failure); I+ (Internal Responsibility for Success): Total I. The I- and I+ may be further categorized as I- (Ability), I- (Effort); and I+ (Effort), I+ (Ability), respectively.
Age Range:	Elementary and high school students
Time to Administer:	20-25 minutes
Test Materials:	Instructions; Scoring Key; Questionnaire
Psychometric Data:	
norms:	923 students, grades 3-12; incomplete SES information
reliability:	Test-retest reliability coefficients are reported at .74 (I-); .66 for (I+); .69 (Total I); and .69(I-); 47(I+); and .65 (Total I), at the elementary levels, and ninth grade, respectively. Split-half reliability coefficients of .57 (I-); .54(I+); and .60 (I-) and (I+) subscales are reported at the elementary and high school levels, respectively.
validity:	IAR yields correlation coefficient of .54 with the Mastery Orientation Inventory (Reynolds & Miller, 1989). Inconsistent data are available on the IAR's predictive validity with standardized achievement-test performance.

References:

Crandall, V.C. Katkovsky, W., & Crandall, V.J. (1965). Children's beliefs in their own control of reinforcements in intellectual academic situations. Child Development, 36(1), 91-109.

Crandall, V.C. Katkovsky, W., & Crandall, V.J. (1965). Intellectual Achievement Responsibility Questionnaire. (Educational Testing Service, Tests in Microfiche No. 999 006098).

Lefcourt, H.M. (1982). Locus of control: Current trends in theory and research (2nd ed.). NJ: Lawrence Erlbaum.

Reynolds, W.M. & Miller, K.L. (1989). Assessment of adolescents learned helplessness in achievement situations. Journal of Personality, 58(2), 211-228.

Test:	Piers-Harris Children's Self-Concept Scale (The Way I Feel About Myself)
Authors:	Ellen V. Piers and Dale B. Harris
Publisher/Distributor:	Western Psychological Services 1231 Wilshire Boulevard Los Angeles, CA 90025
Date:	1969-1984
Test Purpose:	Measure of self-concept in school-age children
Format:	80 choice-type (yes/no) self report questionnaire
Type of Score:	Six Cluster Scores: Behavior, Intellectual and School Status, Physical Appearance and Attributes, Anxiety, Popularity, Happiness and Satisfaction; Total Score
Age Range:	Grades 4-12
Time to Administer:	20-25 minutes
Test Materials:	Revised Manual; Test Booklet; Scoring Key; Profile Form; Computerized Components Available
Psychometric Data:	Refer to the Ninth Mental Measurement Yearbook (1985) for extensive review of technical data.
norms:	Standardized on 1,183 children in grades 4-12; SES information available
reliability:	Test-retest reliability coefficients range of .42 to .96 with mean of .73. Internal consistency coefficients range from .88 to .93 on the Total Scale.
validity:	Intercorrelations between cluster scales of other self-concept measures range from .21 to .59. Higher correlations are indicated between items within scales.
References:	Mitchell, J.V. (Ed.) (1985). The ninth mental measurement yearbook (Vol. 11). Lincoln, NE: Buros Institute of Mental Measurement.

Test:	Children's Nowicki-Strickland Internal-External Control Scale (CNSIE)
Authors:	Stephen Nowicki and B.R. Strickland
Publisher/Distributor:	ETS Test Collection Educational Testing Service Princeton, NJ 08540
Date:	1973
Test Purpose:	To measure locus of control orientation of school-age children
Format:	40 choice-type (yes/no) items
Type of Score:	E-Responses indicative of external orientation
Age Range:	Ages 9 through 18 years
Time to Administer:	15-20 minutes
Test Materials:	Test Form; Scoring Key
Psychometric Data:	Refer to reference for extensive sampling of research completed with the CNSIE
norms:	SES information available on the normative data
validity:	Moderate convergent validity levels reported with the Intellectual Achievement Responsibility Questionnaire (Crandall, Katkovsky, & Crandall, 1965).
reliability:	Refer to reference for extensive summary of re-test reliability studies completed with the CNSIE.

References:

Nowicki, S., & Duke, M.P. (1983). Nowicki-Strickland life-span scales: Construct validation. In Herbert M. Lefcourt (Ed.), Research with the locus of control construct (pp. 9-51). New York: Academic Press.

Test:	Preschool and Primary Nowicki-Strickland Internal-External Control Scale (PPNSIE)
Authors:	Stephen Nowicki & M.P. Duke
Publisher/Distributor:	ETS Test Collection Educational Testing Service Princeton, NJ 08540
Date:	1974
Test Purpose:	To measure locus of control orientation
Format:	26 cartoons; choice-type (yes/no) format; forms available for boys and girls; revised 13-item cartoon presentation (Nowicki, 1981).
Type of Score:	E-Responses indicative of external orientation
Age Range:	Ages under 9 years
Time to Administer:	10-15 minutes
Test Materials:	Test Form; Scoring Key
Psychometric Data:	Refer to Nowicki and Duke's (1983) extensive summary of studies completed with the PPNSIE.
References:	Nowicki, S., & Duke, M.P. (1983). Nowicki-Strickland life-span scales: Construct validation. In Herbert M. Lefcourt (Ed.), Research with the locus of control construct (pp. 9-51). New York: Academic Press.

Test:	Inferred Self-Concept Scale
Author:	E.L. McDaniel
Publisher/Distributor:	Western Psychological Services
Date:	1973
Test Purpose:	Teacher of counselor rating of the child's self-concept
Format:	30-item rating scale
Type of Score:	5-point scale indicative of a "never" to "always" continuum of descriptive statements; Total Score
Age Range:	Grades one through six
Time to Administer:	10-15 minutes
Test Materials:	Manual; Rating Scale
Psychometric Data:	Request information from Western Psychological Services
References:	McDaniel. E.L. (1973). Inferred Self-Concept Scale manual. Los Angeles: Western Psychological Services.

APPENDIX B

Sample Test Directions and Tasks

ANAGRAMS DIRECTIONS

STEP ONE: Student Orientation

I want you to help me find out how kids your age do on a reading test. It looks like this. I will be giving you cards with 5 scrambled up letters on them. I want you to use all 5 letters on the card to make one word.

STEP TWO: Initial Expectation

A) Before we start, I'd like you to tell me how you expect to do on this test by picking a number 0 to 10 on this number line. (Present the **EXPECTANCY** line and have them look at it or feel it.)

1) *If you are sure you are going to get the puzzles all right, pick a high number like 9 or 10.*

2) *If you think you'll get half right, pick a number in the middle like 5.*

3) *If you think you'll get many wrong, select a low number like 0 or 1.*

4) *10 means you'll get them all right and 0 means you'll get them all wrong.*

5) *Point to the number and tell me how you expect to do on this test.*

6) ***PRESENT THE EXPECTANCY LINE***

STEP THREE: Introduce the Demonstration **Soluble** Item

A. Place the anagram in front of the student and say:

"I am placing the first word puzzle in front of you. I want you to read the set of 5 letters and use all 5 letters to make one word. Work on the puzzle until you finish it or no longer wish to work on it. Once you put the puzzle aside you can't go back to it. You may use your braille writer or scratch paper. Show me when you are finished by saying me the word. You may begin.

(If the student fails, give another lower level soluble anagram.)

STEP FOUR: Determine Attributions for Success

A. Open-ended Success Attribution Statements

1. Examiner says: *Why do you think you did well on this part of the test?*

2. Record the student's response on the Mastery Thinking Profile form.

B. Success Attribution Cards

1. Place five SUCCESS cards in front of the student in random order.

2. The examiner points to each card and asks the subject.

"Now I'm putting 5 cards in front of you which have some reasons why some other children thought they did well on this test. We want to know what you think. Each card has one reason."

Point to each card and read reasons. *"Do you think you did well because":*
[For braille readers have them feel it]

a) *You are good at this?*

b) *You tried hard?*

c) *It was an easy test?*

d) *You were lucky?*

e) *Or because of other reasons?*

Point to the card or cards which say why you think you did do well on this test.

After the student has selected a card, the examiner asks "*any others?*"

"Which of these is the most important reason why you did well?"

STEP FIVE: Future Expectancies Following Success Experiences

The examiner asks the student:

"How do you think you would do if I gave you more word puzzles?"

The number line and its directions are used; see STEP TWO.

STEP SIX: Present the 3 **insoluble** puzzles.

A) *I am going to give you more word puzzles to complete. You will have 15 minutes to work on them.*

Work on each puzzle until you finish it or no longer wish to work on it. Once you have put the puzzle aside you can't go back to it.

You may use your braille writer or scratch paper.

Show me when you are finished by saying me the word. Then, I will give you another word puzzle. Remember to read the set of 5 letters and use all five letters to make one word. You may begin.

If they seem to be slowing down at 3 min. ask "*Do you want to keep trying or do you want to go on to the next puzzle?*" Give a maximum of 5 minutes per puzzle. If they exceed 5 minutes encourage them to stop. *It's been 5 min., let's go on to the next one.*

STEP SEVEN:

A. Open-ended Failure Attribution Statements

1. Examiner says: *Why do you think you had trouble on this part of the test?*

2. Record the student's response on the Mastery Thinking Profile form.

B. Attribution Failure Cards

1. Place five FAILURE cards in front of the student in random order.

2. The examiner points to each card and asks the subject.

"Now I'm putting 5 cards in front of you which have some reasons why some other children thought they did not do well on this test. We want to know what you think. Each card each has one reason." Point to each card and read reasons. *"Do you think you did not do well because":*

a) *You are not good at this?*

b) *You could have tried harder?*

c) *It was a hard test?*

d) *You were unlucky?*

e) *Or because of other reasons?*

Point to the card or cards which say why you think you had trouble on this test.

After the student has selected a card, the examiner asks "*any others?*"

"Which of these is the most important reason why you had trouble?"

STEP EIGHT: Future Expectancies Following Failure Experiences

The examiner asks the student:

"How do you think you would do if I gave you more word puzzles?"

The number line and its directions are used see STEP TWO.

STEP NINE: Present final **SOLUBLE** puzzle

"I am going to give you one more word puzzle. You will have 5 minutes to work on it. Work on the puzzle until you finish it or no longer wish to work on it. Once you have put the puzzle aside you can't go back to it. Use all 5 letters to make one word. You may use your braille writer or scratch paper. Show me when you are finished by saying me the word.

B) The examiner places the word puzzle in front of the student.

Remember to use all 5 letters to make one word. You may begin."

C) Begin timing. Allow the student to attempt to complete the puzzle until he/she either succeeds or stops trying. Give a maximum of 5 minutes per puzzle.

If they exceed 5 minutes encourage them to stop by saying *"It's been 5 min., let's go on to the next one."* Give another soluble if failure occurs.

STEP TEN: Determine Attributions for Success or Failure

A. Open-ended Success Attribution Statements

1. Examiner says: *Why do you think you did well on this part of the test?*

2. Record the student's response on the Mastery Thinking Profile form.

B. Attribution Cards

1. Place five SUCCESS cards in front of the student in random order.

2. The examiner points to each card and asks the subject.

"Now I'm putting 5 cards in front of you which have some reasons some other children thought caused them to do well. We want to know what you think. Each card has one reason." Point to each card and read reasons. *"Do you think you did well because":*

a) *Are you good at this?*

b) *Because you tried harder?*

c) *Because it was an easy test?*

d) *Because you were lucky?*

e) *Or because of other reasons?*

Point to the card or cards which say why you think you did do well on this test.

After the student has selected a card, the examiner asks "*any others?*"

STEP ELEVEN: Future Expectancies Following Success Experiences

The examiner asks the student:

"How do you think you would do if I gave you more word puzzles?"

The number line and its directions are used see STEP THREE.

LINE DRAWING DIRECTIONS

STEP ONE: Student Orientation

I want you to help me find out how kids your age do on a test. This is what it looks like. (Sample soluble line drawing is shown to the child.) *When I ask you to start, I want you to connect all the broken lines of the puzzle without lifting your marker and without going over any line twice. It doesn't matter if you stay exactly on the line and the lines don't have to look pretty.*

STEP TWO: Initial Expectation

A) *Before we start the puzzles, I'd like you to tell me how you expect to do on this test by picking a number 0 to 10 on this number line.* (Present the **EXPECTANCY** line and have them look at it or feel it.)

1) If you are sure you are going to get the puzzles all right, pick a high number like 9 or 10.

2) If you think you'll get half right, pick a number in the middle like 5.

3) If you think you'll get many wrong, select a low number like 0 or 1.

4) 10 means you'll get them all right and 0 means you'll get them all wrong.

5) Point to the number that will tell me how you expect to do on this test.

6) **PRESENT THE EXPECTANCY LINE**

STEP THREE: Introduce the Demonstration Soluble Item

I am placing a puzzle in front of you. You are to connect all the broken lines of the puzzle without lifting your marker and without going over any line twice. It doesn't matter if you stay exactly on the line and the lines don't have to look pretty. If you want to start over, ask for another copy of the puzzle. Once you have put a puzzle aside, you can't go back to it.

The two rules are: You must connect all the broken lines without lifting your marker and you can't go over any line twice. Tell me when you are finished or no longer wish to work on the puzzle. You may begin.

If the student fails, give a lower level soluble line drawing.

STEP FOUR: Determine Attributions for Success

A. Open-ended Attribution Statements

1. Examiner says: Why do you think you did well on this test?

2. Record the student's response.

B. Attribution Cards

1. Place five SUCCESS cards in front of the student in random order.

2. The examiner points to each card and tells the subject:

"Now I'm putting 5 cards in front of you which have some reasons why some other children thought they did well on this test. We want to know what you think. Each card has one reason."

Point to each card and read reasons. "Do you think you did well because":

a) You are good at this?

b) You tried hard?

c) It was an easy test?

d) You were lucky?

e) Or because of other reasons?

Point to the card or cards which say why you think you did well on this test.

List sequence left of statements and answers as given by student.

After the student has selected a card, the examiner asks "any others?"

"Which of these is the most important reason why you did well?"

Identify order of importance by numbering to right.

STEP FIVE: Future Expectancies Following Success or Failure Experiences

The examiner asks the student:

"How do you think you would do if I gave you more puzzles?"

The number line and its directions are used see STEP THREE.

STEP SIX: Present 3 insoluble puzzles.

A) I am going to give you three more puzzles to complete.

You will have 15 minutes to work on them. Work on each puzzle until you finish it or no longer wish to work on it.

Once you put the puzzle aside you can't go back to it.

B) It doesn't matter if you stay exactly on the lines and the lines don't have to look pretty. If you want to start over, ask for another copy of the puzzle. The two rules are: You must connect all the broken lines without lifting your marker and you can't go over any line twice.

Tell me when you've finished or no longer wish to work on the puzzle by saying "FINISHED". Then I will give you the next puzzle.

STEP SEVEN:

A. Open-ended Failure Attribution Statements

1. Examiner says: Why do you think you had trouble with this test?

2. Record the student's response.

B. Attribution Failure Cards

1. Place five FAILURE cards in front of the student in random order:

2. The examiner points to each card and tells the subject:

"Now I'm putting 5 cards in front of you which have some reasons why some other children thought they did not do well on this test. We want to know what you think. Each card each has one reason." Point to each card and read reasons. "Do you think you did not do well because":

a) You are not good at this?

b) You could have tried harder?

c) It was a hard test?

d) You were unlucky?

e) Or because of other reasons?

Point to the card or cards which say why you think you did not do well on this test.

After the student has selected a card, the examiner asks "any others?"

"Which of these is the most important reason why you had trouble?"

STEP EIGHT: Future Expectancies Following Failure Experiences

The examiner asks the student:

"How do you think you would do if I gave you more puzzles?"

The number line and its directions are used see STEP THREE.

STEP NINE: Present final SOLUBLE puzzle

I am going to give you another puzzle. You will have 5 minutes to work on it. Work on the puzzle until you finish it or no longer wish to work on it. Once you put the puzzle aside you can't go back to it.

It doesn't matter if you stay exactly on the lines and the lines don't have to look pretty. If you want to start over, ask for another copy of the puzzle. The two rules are: You must connect all the broken lines without lifting your marker and you can't go over any line twice.

Tell me when you've finished or no longer wish to work on the puzzle by saying "FINISHED".

STEP TEN: Determine Attributions for Success or Failure

A. Open-ended Success Attribution Statements

1. Examiner says: Why do you think you did well on this test?

2. Record the student's response.

B. Attribution Cards

1. Place five SUCCESS cards in front of the student in random order.

2. The examiner points to each card and tells the subject.

"Now I'm putting 5 cards in front of you which have some reasons some other children thought caused them to do well. We want to know what you think. Each card has one reason." Point to each card and read reasons. "Do you think you did well because":

a) You are you good at this?

b) You tried hard?

c) It was an easy test?

d) You were lucky?

e) Or because of other reasons?

Point to the card or cards which say why you think you did well on this test.

After the student has selected a card, the examiner asks "any others?"

"Which of these is the most important reason why you did well?"

STEP ELEVEN: Future Expectancies Following Success Experiences

The examiner asks the student:

"How do you think you would do if I gave you more puzzles?"

The number line and its directions are used see STEP THREE.

PUZZLE DIRECTIONS

STUDENT ORIENTATION

STEP ONE: Introduction

I want you to help me find out how kids your age do on a puzzle test. Each puzzle will have several pieces for you to put together to complete the puzzle.

STEP TWO: Initial Expectation for Success or Failure

A) Before we start, I'd like you to tell me how you expect to do on this test by picking a number 0 to 10 on this number line.

B) Present the EXPECTANCY line.

1) If you are sure you are going to get the puzzles all right, pick a high number like 9 or 10.

2) If you think you'll get half right, pick a number in the middle like 5.

3) If you think you'll get many wrong select a low number like 0 or 1.

4) 10 means you'll get them all right and 0 means you'll get them all wrong.

5) Point to the number that will tell me how you expect to do on this test.

STEP THREE: Introduce the Demonstration SOLUBLE Item

A. Place the intact puzzle in front of the student and say:

I am putting a puzzle in front of you, "Feel this."
(the name of the object is not given)

The student feels the intact puzzle. Guide the student's hand if necessary.

B. Remove the piece(s) from the puzzle. Place the piece(s) in the holding box and say:

"Now, you feel it". Part is missing.

C. The student feels the puzzle template and the examiner says:

"The missing piece is next to the puzzle."

Guide the students hand and let the student handle the missing piece.

D. Examiner says:

"I am going to put the pieces of the puzzle together and complete it."

The student feels the completed puzzle.

E. Disassemble the puzzle. Place the piece in the holding box and say:

"Now, you do it."

F. If student fails, give a second lower level soluble puzzle.

STEP FOUR: Present the SOLUBLE Puzzle

A) When I ask you to start, I am going to give you more puzzles to complete.

1) You are to work on each puzzle until you finish it or no longer wish to work on it.

2) Once you have put a puzzle aside you can't go back to it.

3) Show me when you are finished by saying "FINISHED". Then, I will give you another puzzle.

B) The examiner disassembles the soluble puzzle for the student. Place the pieces(s) in the holding box and say:

"I am placing a puzzle in front of you. The missing pieces of the puzzle are in the box at the side."

If necessary guide the students hand to the template or to the holding box and say:

"Complete the puzzle by putting the pieces together. You may begin."

C) Begin timing. Allow the student to attempt to complete the puzzle until he/she either succeeds or stops trying.

D) If they are still trying after 5 minutes, say:
"Let's try another one" and give a second lower level soluble.

Give a maximum of 5 minutes per puzzle.

STEP FIVE: Determine Attributions for Success or Failure

A. Open-ended Attribution Statements

1. Examiner says: Why do you think you did well on this test?

2. Record the student's response on the Mastery Thinking Profile form.

B. Attribution Cards

1. Place five SUCCESS cards in front of the student in random order.

2. The examiner points to each card and asks the subject.

"Now I'm putting 5 cards in front of you which have some reasons why some other children thought they did well on this test. We want to know what you think. Each card has one reason."

Point to each card and read reasons. "Do you think you did well because":

a) You are good at this?

b) You tried hard?

c) It was an easy test?

d) You were lucky?

e) Or because of other reasons?

Point to the card or cards which say why you think you did well on this test.
[For braille readers, have them feel cards]
After the student has selected a card, the examiner asks "any others?"

"Which of these is the most important reason why you did well?"

STEP SIX: Future Expectancies Following Success or Failure Experiences

The examiner asks the student:

"How do you think you would do if I gave you more puzzles?"

The number line and its directions are used see STEP TWO.

STEP SEVEN: Present the 3 INSOLUBLE puzzles.

A) I am going to give you more puzzles to complete.

You will have 15 minutes to work on them. Work on each puzzle until you finish it or no longer wish to work on it.

Once you have put a puzzle aside you can't go back to it.

Show me when you are finished by saying "FINISHED". Then, I will give you another puzzle.

B) The examiner disassembles each puzzle for the student. Place the pieces(s) in the holding box and say:

1) "I am placing a puzzle in front of you. The missing pieces of the puzzle are in the box at the side."

If necessary guide the students hand to the template or to the holding box and say:

2) "Go ahead, complete the puzzle by putting the pieces together.

C) Begin timing. Allow the student to attempt to complete the puzzle until he/she either succeeds or stops trying.

D) Give a maximum of 5 minutes per puzzle. If they are still trying, say "Let's try another one."

STEP EIGHT:

A. Open-ended Attribution Statements

1. Examiner says: Why do you think you did not do well on this test?

2. Record the student's response on the Mastery Thinking Profile form.

B. Attribution Cards

1. Place five FAILURE cards in front of the student in random order.

2. The examiner points to each card and asks the subject.

"Now I'm putting 5 cards in front of you which have some reasons why some other children thought they did not do well on this test. We want to know what you think. Each card has one reason."

Point to each card and read reasons. "Do you think you had trouble because":

a) You are not good at this?

b) You could have tried harder?

c) It was a hard test?

d) You were unlucky?

e) Or because of other reasons?

Point to the card or cards which say why you think you had trouble on this part of test.

[For braille readers, have them feel cards]

After the student has selected a card, the examiner asks "any others?"

"Which of these is the most important reason why you had trouble?"

STEP NINE: Future Expectancies Following Success or Failure Experiences

The examiner asks the student:

"How do you think you would do if I gave you more puzzles?"

The number line and its directions are used see STEP THREE.

PRESENT FINAL SOLUBLE PUZZLE

STEP TEN: Present soluble puzzle

"I am going to give you another puzzle. You will have 5 minutes to work on it. Work on the puzzle until you finish it or no longer wish to work on it. Once you have put the puzzle aside you can't go back to it. Show me when you are finished by saying "FINISHED".

B) The examiner disassembles the puzzle for the student, places the pieces(s) in the holding box and says:

"I am placing the puzzle in front of you. The missing pieces of the puzzle are in the box at the side."

If necessary guide the students hand to the template or to the holding box and say:

"Go ahead, complete the puzzle by putting the pieces together."

C) Begin timing. Allow the student to attempt to complete the puzzle until he/she either succeeds or stops trying. Give a maximum of 5 minutes per puzzle.

D) If they fail to complete it, stop at 5 min. and say, "Let's try another one" and give second lower level soluble.

STEP ELEVEN: Determine Attributions for Success or Failure

A. Open-ended Attribution Statements

1. Examiner says: Why do you think you did well on this test?

2. Record the student's response on the Mastery Thinking Profile form.

B. Attribution Cards

1. Place five SUCCESS cards in front of the student in random order.

2. The examiner points to each card and asks the subject.

"Now I'm putting 5 cards in front of you which have some reasons why some other children thought they did well on this test. We want to know what you think. Each card has one reason".

Point to each card and read reasons. "Do you think you did well because":

a) You are good at this?

b) You tried hard?

c) It was an easy test?

d) You were lucky?

e) Or because of other reasons?

Point to the card or cards which say why you think you did well on this test.

[For braille readers, have them feel cards]

After the student has selected a card, the examiner asks "any others?"

"Which of these is the most important reason why you did well?"

Future Expectancies Following Success or Failure Experiences

The examiner asks the student:

"How do you think you would do if I gave you more puzzles?"

The number line and its directions are used see STEP TWO.

SAMPLE ANAGRAM TASKS

Actual Word (Grade 1)	Soluble Anagrams	Insoluble Anagrams
G I V E	V I G E	G E V O
D O O R	R O D O	D U R O
M A N Y	M N Y A	M Y O N
F I R E	R I F E	F R U E

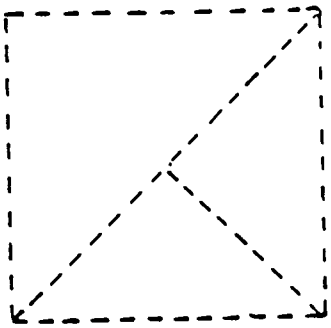
Actual Word (Grade 3)	Soluble Anagrams	Insoluble Anagrams
P L A Y S	S P A Y L	P S Y U L
B L A C K	B K L C A	B U L K C
T R U C K	T U R K C	K T O R C
P L A N S	N A L P S	P S N I L

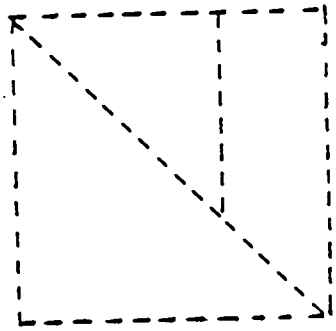
Actual Word (Grade 5)	Soluble Anagrams	Insoluble Anagrams
T O T A L	L O A T T	T E L A T
D A I L Y	L Y I A D	D U L Y I
R A D I O	D R A O I	R O D A E
M A J O R	J R A O M	M U R J A

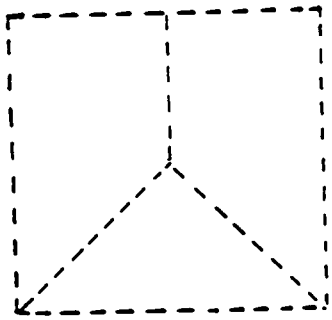
Note: These words were enlarged and brailled on individual 3x5 index cards.

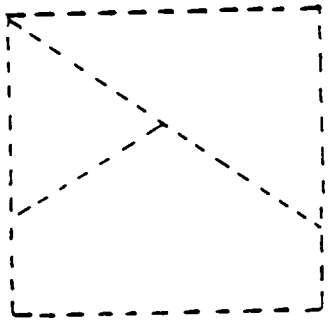
APPENDIX B-5

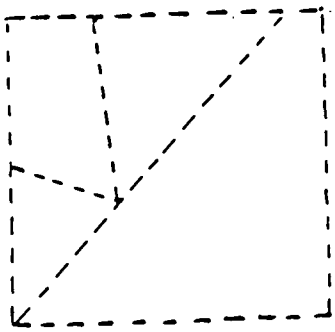
Insoluble Line Drawings[1]





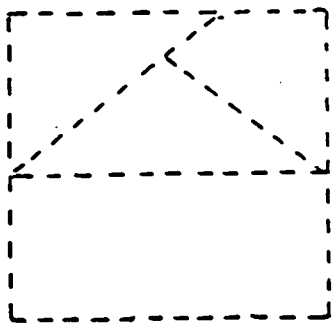


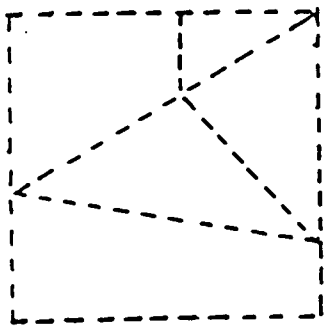


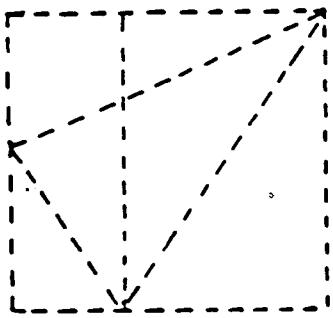


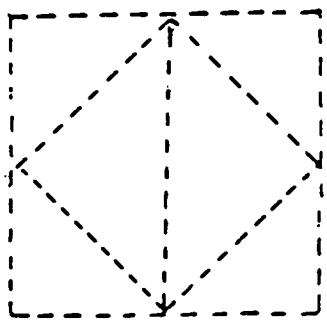
[1]Used by permission Butkowsky, personal communication, 1981

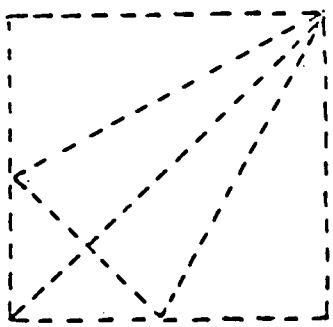
Soluble Line Drawings[1]









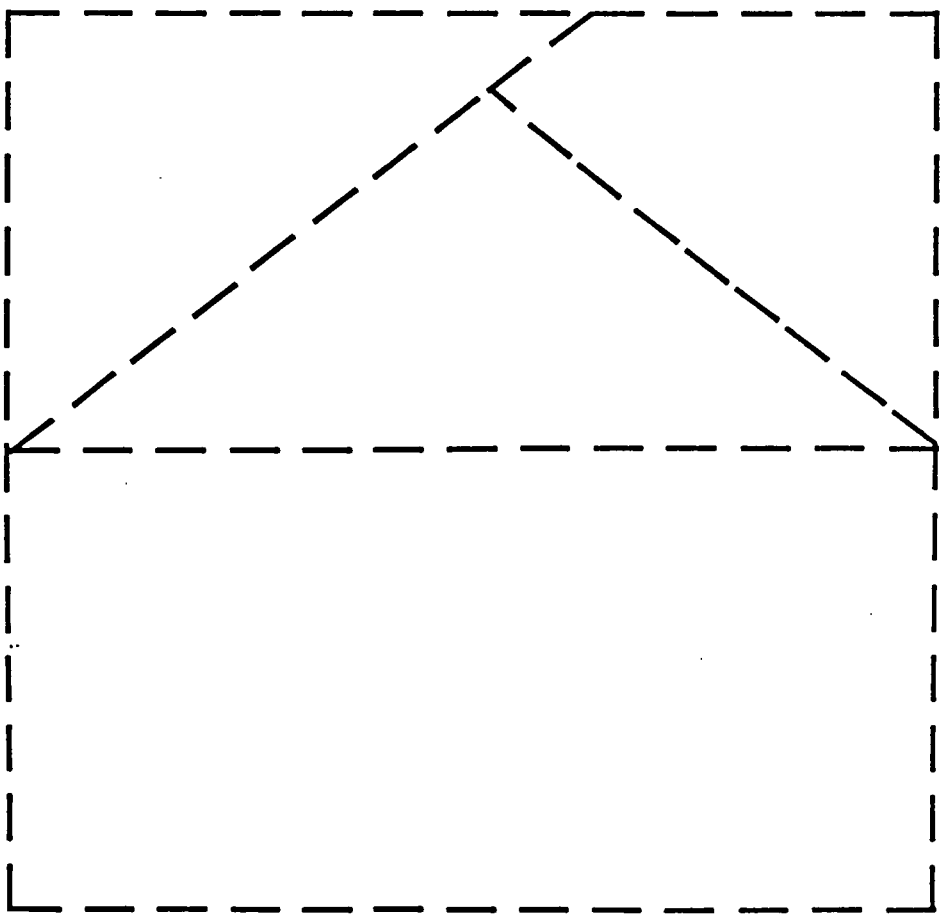


[1]Used by permission Butkowsky, personal communication, 1981

APPENDIX B-7

Sample Large Print

Soluble Line Drawing



APPENDIX C

Sample Recording Forms

Date_____

ANAGRAMS
PUZZLES

RECORDING FORM

Student's Name_____

Teacher's Name_____

School_____

INITIAL EXPECTATION FOR SUCCESS
(circle number student selected)

Demo_____

0 1 2 3 4 5 6 7 8 9 10

SOLUBLE TIME

PUZZLE 1 _____ _____sec.

Used Braille Writer\scratch paper\NA
Did not use

Strategies Observed:

Comments:

. . . . . .
[if needed]
PUZZLE 2 _____ _____sec.

Used Braille writer\scratch paper\NA
Did not use

Strategies Observed:

Comments:

[if needed]
PUZZLE 3 _____sec.

Used Braille writer\scratch paper\NA
Did not use

Strategies Observed:

Comments:

ATTRIBUTIONS FOR SUCCESS

A) Open-ended Attribution Statements

B) CHECK ATTRIBUTION CARDS SELECTED

Spontaneous order	Success Cards	Most important
_____	I am good at this. (ability)	_____
_____	I tried hard. (effort)	_____
_____	It was an easy task. (task ease)	_____
_____	I was lucky. (luck)	_____
_____	Because of other reasons.	_____

FUTURE EXPECTANCY FOR SUCCESS

(circle)

0 1 2 3 4 5 6 7 8 9 10

INSOLUBLE PERSISTENCE TIME

PUZZLE 1 _____ _____ sec.

Used Braille writer\scratch paper\NA
Did not use

Strategies Observed:

Comments:

. . . . . .

PUZZLE 2 _____ _____ sec.

Used Braille writer\scratch paper\NA
Use not use

Strategies Observed:

Comments:

Puzzle 3 _____ _____ sec.

Used Braille writer\scratch paper\NA
Did not use

Strategies Observed:

Comments:

ATTRIBUTIONS FOR FAILURE

A) Open-ended Statements

B) Check Attribution Cards Selected

Failure Cards

Spontaneous order		Most important
_____	I am not good at this. (ability)	_____
_____	I could have tried harder. (effort)	_____
_____	It was a hard task. (task difficult)	_____
_____	I was unlucky. (luck)	_____
_____	Because of other reasons.	_____

FUTURE EXPECTANCY FOR SUCCESS

(circle)

SUCCESS 0 1 2 3 4 5 6 7 8 9 10

SOLUBLE PUZZLES

PUZZLE 1 _____ _____sec.

Used Braille writer\scratch paper\NA
Did not use

Strategies Observed:

Comments:

. . . . . .

[if needed]
PUZZLE 2 _____ _____sec.

Used Braille writer\scratch paper\NA
Did not use

Strategies Observed:

Comments:

[if needed]
PUZZLE 3 _____ _____sec.

Used **Braille writer\scratch paper\NA**
Did not use

Strategies Observed:

Comments:

ATTRIBUTIONS FOR SUCCESS

A) Open-ended Attribution Statements

B) Check Attribution Cards Selected

Spontaneous order	Success Cards	Most important
_____	I am good at this. (ability)	_____
_____	I tried hard. (effort)	_____
_____	It was an easy task. (task ease)	_____
_____	I was lucky. (luck)	_____
_____	Because of other reasons.	_____

FUTURE EXPECTANCY FOR SUCCESS

(circle)

0 1 2 3 4 5 6 7 8 9 10

Date_____ LINE DRAWINGS

RECORDING FORM

Student's Name_____

Teacher's Name_____

School_____

INITIAL EXPECTATION FOR SUCCESS Demo_____
(circle number student selected)

SUCCESS 0 1 2 3 4 5 6 7 8 9 10

SOLUBLE TIME

Puzzle 1 S_____ Try 1 _____sec.

Strategies Observed: Try 2 _____sec.

Try 3 _____sec.

Comments:

. . . . . .

[if needed]
Puzzle 2 S_____ Try 1 _____sec.

Strategies Observed: Try 2 _____sec.

Try 3 _____sec.

Comments:

ATTRIBUTIONS FOR SUCCESS

A) Open-ended Attribution Statements

B) CHECK ATTRIBUTION CARDS SELECTED

Success Cards

Spontaneous order		Most important
_____	I am good at this. (ability)	_____
_____	I tried hard. (effort)	_____
_____	It was an easy task. (task ease)	_____
_____	I was lucky. (luck)	_____
_____	Because of other reasons.	_____

FUTURE EXPECTANCY FOR SUCCESS

(circle)

0 1 2 3 4 5 6 7 8 9 10

INSOLUBLE PERSISTENCE TIME

Puzzle 1 ___I_____ Try 1 _____sec.

Strategies Observed: Try 2 _____sec.

Try 3 _____sec.

Comments:

. . . . . .

Puzzle 2 ___I_____ Try 1 _____sec.

Try 2 _____sec.

Strategies Observed:

Try 3 _____sec.

Comments:

. . . . . .

Puzzle 3 ___I_____ Try 1 _____sec.

Try 2 _____sec.

Strategies Observed:

Try 3 _____sec.

Comments:

ATTRIBUTIONS FOR FAILURE

A) Open-ended Statements

B) Check Attribution Cards Selected

Spontaneous order	Failure Cards	Most important
_____	I am not good at this. (ability)	_____
_____	I could have tried harder. (effort)	_____
_____	It was a hard task. (task difficult)	_____
_____	I was unlucky. (luck)	_____
_____	Because of other reasons.	_____

FUTURE EXPECTANCY FOR SUCCESS

(circle)

0 1 2 3 4 5 6 7 8 9 10

SOLUBLE PUZZLES

Puzzle 1 ___S___ Try 1 _____sec.

Strategies Observed: Try 2 _____sec.

Try 3 _____sec.

Comments:

. . . . . .

[if needed]

Puzzle 2 ___S___ Try 1 _____sec.

Try 2 _____sec.

Strategies Observed:

Try 3 _____sec.

Comments:

. . . . . .

[if needed]

Puzzle 3 ___S___ Try 1 _____sec.

Try 2 _____sec.

Strategies Observed:

Try 3 _____sec.

Comments:

ATTRIBUTIONS FOR SUCCESS

A) Open-ended Attribution Statements

B) Check Attribution Cards Selected

Success Cards

Spontaneous order		Most important
_____	I am good at this. (ability)	_____
_____	I tried hard. (effort)	_____
_____	It was an easy task. (task ease)	_____
_____	I was lucky. (luck)	_____
_____	Because of other reasons.	_____

FUTURE EXPECTANCY FOR SUCCESS

(circle)

0 1 2 3 4 5 6 7 8 9 10

APPENDIX D

Study One

The Assessment of Mastery Orientation and
Learned Helplessness Among Visually Impaired Students

Study One

Assessment of Mastery Orientation and Learned Helplessness Among Visually Impaired Students

The purpose of this study was to identify mastery oriented and learned helpless response patterns among visually impaired students through the Dweck Effort/Ability IAR Subscale (Diener & Dweck, 1978, 1980).

Methodology

This section provides a description of the test instrument, test administration, scoring, and data analysis procedures.

Test Instrument

The Dweck Effort/Ability IAR Subscale is a measure of internalized self-responsibility for academic performance that originated from the Intellectual Achievement Responsibility (IAR) Questionnaire (Crandall, Katkovsky, & Crandall, 1965). The IAR is a well researched locus of control measure of students' cognitive and motivational learning styles (Crandall et al., 1965; Diener & Dweck, 1978, 1980; Dweck, 1975; Dweck & Rupucci, 1973). Each of the IAR's 34 forced-choice questions are indicative of the student's identification of self-responsibility for either success or failure of academic performance in the classroom (see Appendix A for a summary of the IAR test format and technical data). The Dweck Effort/Ability IAR Subscale is comprised of ten IAR items identified as highly representative of internalized self-responsibility for failure outcome in the classroom (see Appendix J). Although, the entire IAR was administered to each student, only the ten

Dweck Effort/Ability IAR Subscale questions were analyzed in this study.

Test Administration

The IAR was individually administered to a total of 21 visually impaired students, 14 students of whom comprised the target group. Eight students attended the State School for the Blind, and 6 students were enrolled in mainstreamed classrooms in the Local Educational Agency (LEA). The test was administered at each student's school site, in suitable testing environments. Following the establishment of rapport and presentation of the test instructions, all 34 questions were administered. As the examiner read each question aloud, the low vision or blind student followed along using either a large print or braille test form. Following the student's oral selection of the "A" or "B" response choice for each question, the examiner recorded the answer. The test sessions averaged 20-25 minutes in length.

Scoring

Each student's score was analyzed by application of the Dweck Effort/Ability Subscale scoring criteria (Diener & Dweck, 1978, 1980) for identification of a mastery oriented or learned helpless response pattern. On a continuum from one to ten, a higher score indicates the student exhibits a greater degree of personal and internalized self-responsibility for failure outcome (*mastery orientation*), while a lower score suggests the student blames the failure outcome on an external cause (*learned helplessness*) in academic situations. Diener and Dweck identified students as mastery oriented with a score of 8 or above, and learned helpless with a score of 6 or below. The score of 7 was omitted. In this study, however, the score of 7 was included because of the small sample size. The score of

7 was designated as the highest possible learned helpless score on the ten-point continuum.

Data Analysis

Initially, the Dweck Effort/Ability IAR Subscale scores were analyzed by range, mean, and standard deviation across school placements. The scores were further interpreted by the percentage of scores falling in the mastery oriented and learned helpless domains across the variables of total group, school placement, degree of vision, and gender.

Results

This section provides data on the number of students indicating mastery oriented or learned helpless response patterns across: a) total group; b) school placement; c) degree of vision; and d) gender.

Total Group

The results of the Dweck Effort/Ability IAR Subscale indicate six students (43%) were mastery oriented and eight students (57%) were learned helpless across the total group of visually impaired students (see Table 1-D). A preliminary review of the students' raw scores indicated the existence of an extreme outlier score (see Table 1-D, student A-1). The score was excluded from the remaining data analysis, because of its inordinate effect on the results, due to the concomitant influence of its extreme deviation from the general cluster of scores and small sample size. The inclusion of this score would have presented an artificially depressed response pattern profile of the State School students.

School Placements

The initial analysis of data suggests the LEA students ($\bar{x}=7.83$) had a slightly higher

level of internalized and personal self-responsibility for failure outcome in the classroom than the State School students ($\bar{x}$=7.0) (see Table 2-D). Although, the mean scores of both groups fell within the learned helpless range, the mean score of the LEA group approached the mastery oriented cutoff score of 8 points. Across both groups, the range and standard deviation scores of the LEA students (Range=3, SD= 1.17) and State School students (Range=2, SD=.82) further supports the relative small distance between the highest and lowest scores, and small variability of scores around the mean scores. The students' scores were further analyzed by percent across the variables of school placement. The LEA group had four students (67%) and the State School had two students (29%) scoring in the mastery oriented range. The LEA group had two students (33%) and the State School group had five students (71%) scoring in the learned helpless range.

Degree of Vision

In comparing the degree of vision, the low vision students had a higher percentage of students (57%) scoring in the mastery oriented range. The blind students, however, had a higher percentage of students (67%) falling in the learned helpless range. **Gender**

Across the variable of gender, the male students had a higher percentage of scores (60%) in the learned helpless range, and the female students were evenly distributed at 50% between the mastery oriented and learned helpless domains.

Discussion and Implications

The preliminary data suggests the Dweck Effort/Ability IAR Subscale may identify mastery oriented and learned helpless response patterns among visually impaired students. There are a number of possible explanations for these response patterns that require further

investigation.

First, across the total group there was a relatively even distribution between the mastery oriented and learned helpless students. Eight students were in the position to increase or decrease their level of mastery orientation by a one point margin. These students would likely be considered at-risk for exhibiting learned helplessness. Therefore, it would be imperative to apply teaching strategies and interventions to enhance the development of mastery oriented learning styles for these students.

Second, across school placements, the LEA group had more students scoring in the mastery oriented range, while the State School had more students scoring in the learned helpless range. It would appear the LEA students assumed more personal and self-responsibility for failure outcomes in the classroom, than did the State School students. Why did more LEA students score in the mastery oriented range? Initially such variables as sampling representation and sample size are possible explanations. Furthermore, other factors, such as school placement (class size, teacher-student ratio, curriculum, teacher expectations), student characteristics (intellectual potential, academic performance, social-emotional status), socio-economic background, degree of vision, and gender may influence the student's score on this subscale.

Third, across the degree of vision, more of the low vision students scored in the mastery oriented range, while a greater number of blind students scored in the learned helpless range. It would appear the low vision students assumed a higher level of internalized self-responsibility for failure performance in academic situations than did the blind students. Foremost, the degree of vision will play a significant role in the development

of the student's expectations, beliefs, and learning styles. However, school placement, teacher and parent expectations, and student characteristics will be major factors in the conceptualization of mastery oriented or learned helpless patterns of both low vision and blind students.

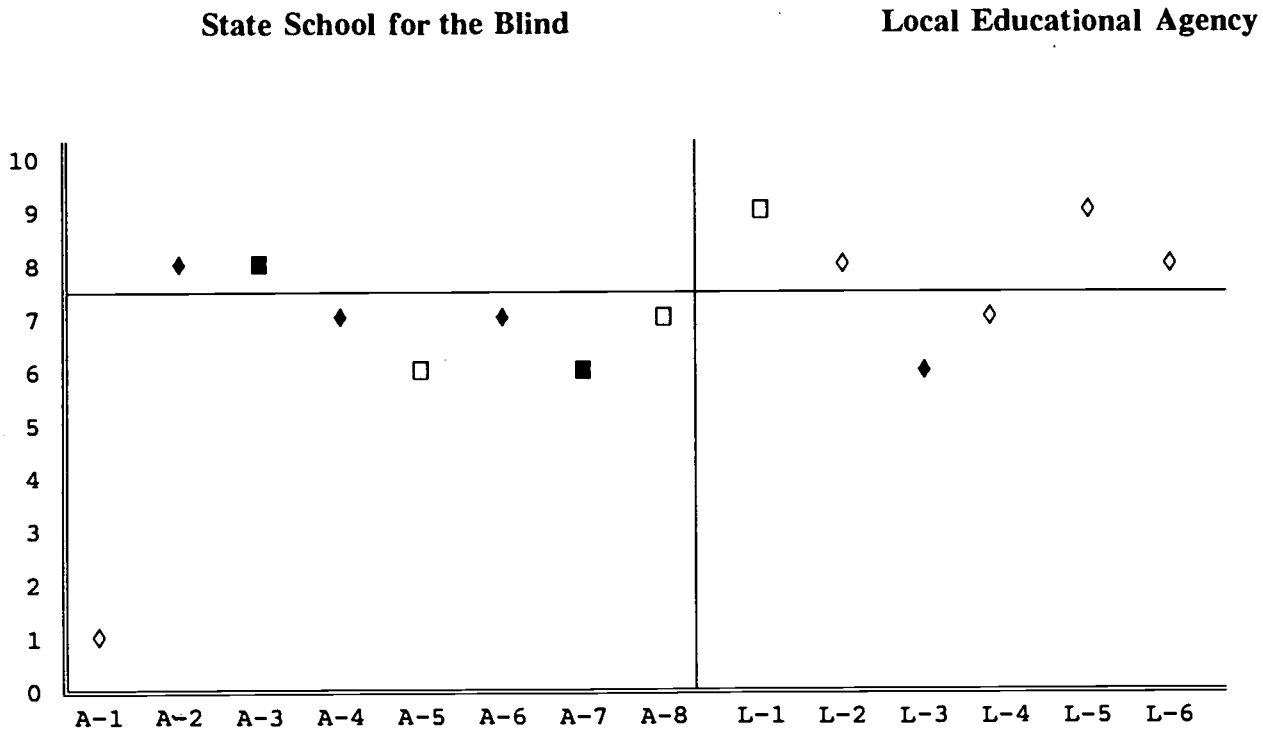
Fourth, across gender, more female students scored in the mastery oriented range, while the male students had more scores in the learned helpless range. It would appear the female students assumed a slightly higher level of internalized self-responsibility for failure in the classroom than the male students; although, the female students scores were evenly distributed at 50% between the mastery oriented and learned helpless domains. The gender representation of the present study does not lend itself to generalizability of the findings. It would be necessary to conduct research on a larger sample, therefore, to further investigate the impact of gender upon the response patterns of visually impaired students.

In summary, the Dweck Effort/Ability IAR Subscale may prove to be a useful instrument in identifying mastery oriented and learned helpless visually impaired students. In consideration of the statistical restrictions imposed by the sample size, however, the generalizability of the findings is not firmly established by the data. Future research on a larger sample would further support validity of this subscale in identification of mastery oriented and learned helpless visually impaired students, as well as promote the research of teacher training and intervention strategies in this area.

Table 1-D

Dweck Effort/Ability IAR Subscale Scores

Mastery Oriented and Helpless Visually Impaired Students



Key:

Horizontal Axis: Visually Impaired Students
Vertical Axis: Dweck Effort/Ability IAR Subscale Scores
(1-7: Helpless, 8-10: Mastery Oriented)

Low Vision Male: □

Low Vision Female: ◇

Blind Male: ■

Blind Female: ◆

Table 2-D

Dweck Effort/Ability IAR Subscale Score Range, Mean and Standard Deviation

School Placement	Range	Mean	SD
State School	2	7.0	.82
LEA	3	7.83	1.17

Table 3-D

Dweck Effort/Ability IAR Subscale

Number and Percent of Mastery Oriented and Learned Helpless Visually Impaired Students

	Mastery Oriented		Learned Helpless	
	n	%	n	%
School Placement				
State School	2	29	5	71
LEA	4	67	2	33
Degree of Vision				
Low Vision	4	57	3	43
Blind	2	33	4	67
Gender				
Male	2	40	3	60
Female	4	50	4	50

APPENDIX E

Study Two
Student Expectations For Success

Study Two

Student Expectation For Success

The purpose of this study was to determine visually impaired students' expectations for success under four distinct conditions: 1) initial expectancy before attempting a novel soluble task; 2) expectancy after a soluble task; 3) expectancy after failing three insoluble tasks; and 4) expectancy after successfully completing a final soluble task.

Methodology

This section provides a description of the methodology including: selection of students; a description of the assessment instrument; and the procedural sequence for obtaining data on student expectations for success.

Selection of Students

Students were selected based on availability for extensive participation more than for representativeness of the population to be assessed. Because this was a developmental project, it was necessary to have cooperation from students to a degree far beyond that which is required to obtain "norms" for student behavior. Thus, no random sampling was utilized. Rather, the students at the state school site and the local educational agency site were studied to determine those who would be available for most in-depth study. From the students who were available, the goal was to select a sample to represent the variety of blind and visually impaired students in these settings.

For this research project, a low vision group with visual acuities between 20/200 and the ability to count fingers at 3' or greater; and a blind group whose visual acuities range

from the ability to count fingers at 3' or less to no ability to perceive light were selected. These two groups have distinctly different visual abilities and experiences.

Students were required to meet certain criteria regarding grade level, intelligence, and disability. Visually impaired students were in grades 3-6 and within one year of appropriate chronological age for that grade. This eliminated retardation or giftedness as a variable. Finally, visually impaired students were selected who were not multiply handicapped, i.e., have any identified handicapping condition other than their visual impairment. This restricted confounding variables for data interpretation. Because of the extremely low prevalence of visually impaired students, the number of students included was small, N = 14.

The Assessment Instrument

Three different tasks (anagrams, line drawings, and puzzles) were specifically chosen to create two different kinds of success and failure experience. The anagrams represented an "academic-like" task which was perceived by the students as similar to reading and spelling in school. This perception of similarity to reading tasks should result in expectancies more in concert with those evoked by genuine reading or academic activities. The anagrams were chosen because they are sufficiently novel to be motivating and could be made to appear soluble when, in fact, they were not. Anagrams are a commonly used task for testing attributions and learned helplessness theory (Weiner, 1979, 1985a, 1985b; Seligman, 1975). The line drawings/puzzles were chosen to provide a novel and nonacademic, apparently soluble task to see if expectancies, attributions, and persistence would vary from the "academic-like" task (anagrams). It was thought that puzzles were

sufficiently similar in nature to line drawings to allow them to be used by the students who were blind and unable to make the visual response required of the line drawing task.

Anagrams The anagrams used were three, four and five-letter words randomly reordered and Brailled or typed in large print on 5 x 8 index cards and placed in separate envelopes. None of the anagram words contained Braille contractions or short forms. All the soluble anagrams were formed from uncontracted Braille words found in basal reader lists at the first, second, and third grade reading level. The insoluble anagrams were created by changing one letter of the soluble anagrams.

The anagram task requires the students to look at a sequence of printed or Brailled letters and attempt to rearrange the letters to form a word. This is a complex task which requires the same kinds of inter-sensory abilities required of reading. Students must discriminate the differences and similarities of one alphabet letter from another within the anagram. Visual or tactile memory is necessary for recognizing different patterns or configurations of letters in the anagrams which may form recognizable words, and for rearranging sequences of letters in the anagram to form meaningful word units.

Line Drawings The line drawings were geometric forms within squares, based on those used by Weiner (1979, 1985a, 1985b) and adapted by Butkowsky and Willows (1980). The insoluble forms were not discernible as insoluble to the naive student. Each bold line drawing was placed on an individual 8 1/2 x 11 sheet of paper and placed in an individual manila envelope.

The line drawing task is a visual-perceptual motor task which requires the students to trace the outlines of printed figures without recrossing any line. This task primarily

requires visual-motor integrative abilities. Students must be able to plan and execute the necessary motor patterns for tracing. Fine motor coordination is required to hold the marker, trace the lines of the figure, and make directional changes.

Puzzles The puzzles used were geometric forms in two, three and four parts. The insoluble forms were not discernible as insoluble to the naive student. Each disassembled puzzle was placed on the table before the student. The puzzle task is a motor task which requires the student to tactually explore the parts (puzzle pieces) and to create a whole image (geometric shape). This task requires tactile-kinesthetic integrative abilities.

If the students perceived the anagrams as academic tasks, and the line drawings (puzzles) as nonacademic, then there could be great differences in expectancies, attributions and performance. Throughout testing the students seemed to perceive the tasks as different with anagrams being perceived as "like reading."

Expectancy Measure

To assess student expectation for success, a large print number line from 0 to 10 was used. It was accompanied by corresponding smaller to larger black dots over the numbers and the words "All Wrong" under the zero and "All Right" under the number ten. Students were all familiar with a number line representing 0-10, but the graduated dots are a visual reminder of the proper direction for increased expectancy. The words are helpful to those whose reading level is sufficient and the simplicity of the words makes it accessible to almost everyone. See Appendix I for Expectancy of Success Line and examiner instructions. Before this study was undertaken, this procedure was successfully pilot tested with five students. For those students who were Braille readers, a Brailled version of the expectancy

line was employed with a tactile equivalent to the graduated dots.

Data Analysis

Each student's expectation for success on the anagram and line drawings/puzzle tasks was analyzed across the variables of gender, school placement, and degree of vision. The data analyses were completed on four expectancy conditions: Initial Expectancy, Expectancy After Success (First Soluble Task), Expectancy After Failure, and Expectancy After Success (Final Soluble Task).

Two sample t tests and Mann-Whitney U tests were conducted for tests of difference. The Pearson product-moment correlation and t test of correlation were used for the measures of association.

Procedural Sequence

Students were given a soluble task followed by three insoluble tasks, and a final soluble task. The students' expectancy for success was measured before attempting the task and following successful and unsuccessful experiences. Eight procedural steps were followed to assess student expectancies for success before engaging in a new task, after successful experiences and after failure experiences.

Step One - Student Orientation Students were given an orientation for each type of task being presented.

Step Two - Initial Expectation Following this orientation, the student was shown an Expectancy Number Line:

A) *Before we start, I 'd like you to tell me how you expect to do on this task by picking a*

number from 0 to 10 on this number line. (Present the Expectancy of Success Line and have the student look at or feel it.)

1) *If you are sure you are going to get the puzzles all right, pick a high number like 9 to 10.*

2) *If you think you'll get half right, pick a number in the middle like 5.*

3) *If you think you'll get many wrong, select a low number like 0 or 1.*

4) *10 means you'll get them all right and 0 means you'll get them all wrong.*

5) *Point to the number and tell me how you expect to do on this task.*

6) *Present the expectancy line*

Step Three - Introduce the Demonstration Soluble Item

The task material was placed in front of the student and the examiner gave the student the directions for completing the task. If the student failed, the examiner gave another lower level soluble task. This was repeated until the student was successful.

Step Four - Future Expectancies Following Success Experiences

Following successful completion of the demonstration task, the student was asked *"How do you think you would do if I gave you some more of these puzzles"?* Present the Expectancy for Success Line. (See Step Two.)

Step Five - Present the Three Insoluble Items

Students were given three insoluble items. If students seemed to be slowing down at 3 minutes they were asked *"Do you want to keep trying or do you want to go on to the next puzzle"?* A maximum of five minutes was given per puzzle. If they exceeded five minutes, they were encouraged to stop and the next insoluble item was given.

Step Six - Future Expectancies Following Failure Experiences

After failing the three insoluble items, students were asked how they would expect to do if given more puzzles in the future using the Expectancy for Success Line (see Step Two).

Step Seven - Present Final Soluble Item

The examiner tells the student that he/she is going to give them one more puzzle, and they will have five minutes to work on it. If they exceed five minutes or if failure occurs, they are given another simpler item.

Step Eight - Future Expectancies Following Success Experiences

After successfully completing the final soluble item, students were asked how they would expect to do if given more puzzles in the future using the Expectancy for Success Line (see Step Two).

Results

A comparison of the expectancy for success statements made by the seven visually impaired students placed at the State School and the six visually impaired students placed in general education classrooms in Local Educational Agencies (LEA) students reveals a great difference between the two groups. Because of the small number of students included in this pilot study, the generalizability of the results is questionable but it suggests some interesting implications. Table 1-E presents the number of students expecting to succeed on 50% or more of the tasks. Thus, 5/7 indicates that 5 of 7 State School students (71%) expected to be successful on 50% or more of the tasks.

The seven State School students made a total of 60 statements about their expectancies to succeed on anagram, line drawing, or puzzle tasks. Statements were made

before attempting the task, after initial success, after failure, and after a final successful experience. Forty seven of the 60 statements made by the seven State School students (78%) expressed an expectation to succeed on more than 50% of similar tasks in the future. In contrast, the six students from the LEA made only 19 of their 48 statements (40%) expressing an expectation to succeed in more than 50% of similar tasks in the future. A more detailed analysis follows (see Table 1-E).

Initial Expectancy

Of the 15 expectations made by seven State School students, nine expectations (60%) were to experience success on more than 50% of the tasks. State School students expressed higher initial expectations for success than did 6 of the 12 expectancies for success made by students (50%) mainstreamed in the general education classrooms.

Anagram Tasks Of the 7 State School students, 5 students (71%) expected to be successful on more than half of future anagram tasks. Only 2 of 6 LEA mainstreamed students (33.3%) expected to be successful on more than half of the anagram tasks before trying them.

Line Drawing Tasks A similar pattern was found for the line drawing task. Two of 3 State School students (67%) expressed initial expectancy for success on more than half the line drawing tasks, whereas 3 of 5 LEA mainstreamed students (60%) expected to get more than half of future line drawing tasks correct.

Puzzle Tasks On the puzzle tasks, however, only 2 of 5 State School students (40%) expected to succeed on more than half the tasks. One LEA mainstreamed student (100%) expected to succeed on more than half of future puzzle tasks.

Expectancies After Success: First Soluble Task

Following success on the first soluble anagram, line drawing, or puzzle tasks, students were asked whether or not they would expect to be successful on additional similar tasks. All 15 State School expectations (100%) and 7 of 12 LEA expectations (58%) were to experience success on more than half of future similar tasks.

Anagram Tasks All 7 (100%) State School students and 3 of 6 LEA students (50%) expected to be successful on more than half of future anagram tasks.

Line Drawing Tasks On line drawing tasks, all 3 State School students (100%) and 3 of 5 of LEA students (60%) expected to succeed on more than half of future line drawing tasks.

Puzzle Tasks All 5 State School students (100%) and the one LEA student (100%) expected to succeed on more than half of future puzzle tasks.

Expectancies After Failure

Following failure on three insoluble anagram or three line drawing or puzzle tasks, students were asked whether or not they would expect to be successful on additional similar tasks. Ten of 15 State School expectancies (67%) were to experience success on more than half the tasks. Only one of 12 LEA expectancies (8%) were to experience success on more than half the tasks.

Anagram Tasks Five of 7 State School students (41%) expected to be successful on more than half of future anagram tasks. No students (0) from the LEA expected to be successful on more than half of future anagram tasks.

Line Drawing Tasks On the line drawing task, 2 of 3 state school students (67%)

expected to succeed on more than half of future line drawing tasks. One of 5 students (20%) mainstreamed in a general education classroom expected to be successful in completing more than half of future line drawing tasks.

Puzzle Tasks Of the 5 students from the State School, 3 students (60%) expected to succeed on more than half of future puzzle tasks. The one student from the LEA did not expect to succeed on more than half the future puzzle tasks.

Expectancy by Degree of Vision There was a significant difference ($t=-2.90$, $p=.014$) in the expectancy after failure on the anagram task for the low vision and blind students. The sample mean expectancy of the blind students ($\bar{x}=7.20$) was higher than the sample mean expectancy of the low vision students ($\bar{x}=2.19$). It appeared that the blind students had a higher expectation for future success than the low vision students following completion of the insoluble anagram task.

<u>Expectancies After Success: Final Soluble Task</u>

After succeeding on a final soluble anagram task and on line drawing or puzzle task, students were asked to what extent they would expect to be successful in the future on additional similar tasks. Thirteen of 15 responses (87%) of the State School students expected success on more than half the tasks. Six of 12 responses from the LEA students (50%) expected success on more than half the tasks.

Anagram Tasks Five of 7 state school students (71.4%) expected to be successful on more than half the anagram tasks. Three of 6 students (50%) from the local educational agency expected to be successful on more than half the anagram tasks.

Line Drawing Tasks All three (100%) state school students expected to be

successful on more than half the line drawing tasks. Two of the 5 local educational agency students (40%) expected to be successful on more than half the line drawing tasks (see Table 1-E).

Puzzle Tasks Five state school students (100%) and one local educational agency student (100%) expected to be successful on more than half the puzzle tasks. A sample of one is not sufficient for generalizability.

Expectancy Across Task Conditions

An analysis of student expectancy for success across the 4 task conditions (initial expectancy, after success on the first soluble, after failure, and after the final soluble task) by type of task (anagrams, line drawings, and puzzles) revealed that the State School students held a greater expectation for success than did the mainstreamed students in the general education classroom.

An analysis of student success expectancy responses for anagram tasks revealed that 22 of 28 State School expectancies (79%) and 8 of 24 LEA expectancies (33%) were to succeed on more than half the tasks.

On puzzle tasks, the responses between State School students and LEA students on puzzle tasks revealed the same expectancy to succeed (75%) on more than half the tasks.

Overall, 78% of the expectations of State School students were to succeed on more than half the tasks as compared to 40% of the expectations of the LEA students.

Expectancy Shift Data

The expectancy shift data were derived from the differences between selected pairs of the original expectancy categories. Six pairs of expectancy shifts (initial to first soluble,

initial to insoluble, initial to final soluble, first soluble to insoluble, first soluble to final soluble, and insoluble to final soluble) were analyzed across the variables of task, gender, school placement, and degree of vision.

There was a significant difference ($t=2.53$, $p=.026$) in the expectancy shift of initial expectancy to expectancy after failure between the anagram and line drawing/puzzle tasks. It appeared the students' expectation for future success on anagram tasks significantly decreased between the initial expectancy and after failure on the insoluble anagram tasks. In contrast, less change in the expectancy shift of initial to after failure was evident for the line drawing/puzzle tasks.

There was a significant difference ($t=2.61$, $p=.031$) in the expectancy shift of first soluble to insoluble task across vision. The sample mean expectancy shift of the low vision students ($\bar{x}=3.56$) was higher than the sample mean expectancy shift of the blind students ($\bar{x}=-1.00$). It appeared the low vision students made more changes than the blind students in their level of expectation for future success, from the first soluble task to after failure on the insoluble tasks.

Expectancy Correlations

There was a high correlation ($r=.81$, $p<.001$) between the initial expectancy and expectancy after completion of the first soluble line drawing/puzzle task. Students who had a high initial expectancy tended to have a high expectancy of success following completion of the first soluble line drawing/puzzle task. In contrast, those students who tended to have a low initial expectancy of success, also had a low expectancy of future success following completion of the first soluble line drawing/puzzle task.

There was a moderately high correlation ($r=.70$, $p<.01$) between the initial expectancy and expectancy after failure on the line drawing/puzzle task. Students who had a high initial expectancy for success also had a high expectancy for success after failure on the insoluble task. Students who had low initial expectancy for success also had a low expectancy after failure on the insoluble task.

There was a moderately high correlation ($r=.76$, $p<.01$) between the expectancy after failure on the insoluble line drawing/puzzle task and after success on the final soluble line drawing/puzzle task. Those students who had a high expectancy after failure tended to have a high expectancy following the final soluble task. Students who had a low expectancy after failure also had a low expectancy after the final soluble task.

There was a moderately high correlation ($r=.75$, $p<.01$) between the expectancy after the first soluble anagram and line drawing/puzzle tasks. Those students who had a high expectancy on the first soluble anagram task also had a high expectancy on the line drawing/puzzle task. Students who had a low expectancy on the first soluble anagram task also had a low expectancy on the first soluble line drawing/puzzle task.

Discussion and Implications

As one might expect, a comparison of expectation to succeed on initial expectations and expectations following success on the first soluble revealed an increase by all students across tasks, with the sole exception of LEA line drawings which remained constant. After failure on three insoluble tasks, however, all students lowered their expectations for success, but expectation from LEA students dropped more.

Two important questions are raised by the results of this study: 1) *"Do visually*

impaired students enrolled in state school institutions have twice the degree of expectation to succeed when compared to visually impaired students mainstreamed in general education classrooms"? and 2) *"If so, why"*? The results of this pilot study have interesting implications for the field.

First, is the difference between educational settings responsible for differences in expectations between the two settings? At the State School, there is a very low teacher-student ratio, one VI trained teacher for six to eight visually impaired students. In the LEA general education classroom, there is one general education teacher (not trained in visual impairment) for 25 to 30 students. Perhaps students' expectations to succeed at the State School are enhanced by the additional attention and more frequent help they receive due to a smaller teacher-student ratio.

Second, do students at the State School have a less realistic appraisal of their self perceived abilities to be successful in relation to specific tasks, because they are not in as competitive an educational setting as are students from local educational agencies? In the general education classroom, the visually impaired student must compete with seeing students. Self comparisons are inevitable though not necessarily accurate. A higher level of competition and comparison of abilities may result in a mainstreamed student generating a set of expectancy norms that are quite different from the experiential base of the student in the less competitive State School environment.

Third, do State School teachers have higher expectations for the successful performance of visually impaired students than do general education teachers? There needs to be further exploration of the relationship between teacher expectations for success and

student performance and expectation to succeed.

Fourth, to what extent do parental expectations for their student's success influence the student's expectations? There needs to be further exploration about the relationship between parental expectation and student expectation of success.

Fifth, to what extent do internal factors such as the degree of visual impairment, mobility, language ability, or other physical factors affect expectation for success and can those factors be controlled? There is a need to investigate the possible factors that influence a student's expectation for success. A student who expects to succeed usually persists and does well.

A student who expects to fail will not persist, and a student who will not persist cannot succeed. It is important, therefore, that parents and teachers make every effort to develop realistic expectations for success among visually impaired students. To accomplish this, we must identify the key factors in developing expectations for success rather than expectations for failure, so we can create effective learning environments and strategies for teaching student's realistic expectations for success.

TABLE 1-E

EXPECTANCY STATEMENTS FOR SUCCESS:
Total Number and Percent

(State School N=7)
(LEA N=6)

EXPECTANCY FOR SUCCESS	ANAGRAM		LINE DRAWING		PUZZLE		TOTAL	
	SS*	LEA**	SS	LEA	SS	LEA	SS	LEA
INITIAL EXPECTATION	5/7 71%	2/6 33%	2/3 67%	3/5 60%	2/5 40%	1/1 100%	9/15 60%	6/12 50%
AFTER SUCCESS ON SOLUBLE TASK	7/7 100%	3/6 50%	3/3 100%	3/5 60%	5/5 100%	1/1 100%	15/15 100%	7/12 58%
AFTER FAILURE ON INSOLUBLE TASKS	5/7 71.4%	0/6 0%	2/3 67%	1/5 20%	3/5 60%	0/1 0%	10/15 67%	1/12 8%
AFTER SUCCESS ON SOLUBLE TASKS	5/7 71.4%	3/6 50%	3/3 100%	2/5 40%	5/5 100%	1/1 100%	13/15 87%	6/12 50%
TOTAL	22/28 79%	8/24 33%	10/12 83%	8/20 40%	15/20 75%	3/4 75%	47/60 78%	19/48 40%

*SS = State School - VI students placed at State School for the Blind

**LEA = Local Educational Agency- VI students placed in general educational classrooms in local educational agencies.

Fractions = e.g., 5/7 means that 5 of 7 State School students expected to succeed on *more* than 50% of the tasks.

APPENDIX F

Study Three
Persistence Time

Study Three

Persistence Time

The purpose of this study was to determine whether visually impaired students demonstrate any kind of persistence patterns with respect to the amount of time they spend in attempting to solve insoluble tasks. More specifically, does the persistence time of visually impaired students increase, remain constant, or decrease after failure?

Methodology

This section includes the procedures for: selection of students; instrumentation; and the procedural sequence for collecting data.

Selection of Students

Students were selected based on availability for extensive participation more than for representativeness of the population to be assessed. Because this was a developmental project, it was necessary to have cooperation from students to a degree far beyond that which is required to obtain "norms" for student behavior. Thus, no random sampling was utilized. Rather, the students at the state school site and the local educational agency site were studied to determine those who would be available for most in-depth study. From the students who were available, the goal was to select a sample to represent the variety of blind and visually impaired students in these settings.

For this research project, a low vision group (with visual acuities between 20/200 and the ability to count fingers at 3' or greater) and a blind group (whose visual acuities range from the ability to count fingers at 3' or less to an inability to perceive light) were selected. These two groups have distinctly different visual abilities and experiences.

Students were required to meet certain criteria regarding grade level, intelligence, and disability. Visually impaired students were in grades 3-6 and within one year of appropriate chronological age for that grade. This eliminated retardation or giftedness as a variable. Finally, visually impaired students were selected who were not multiply handicapped, i.e., have any identified handicapping condition other than their visual impairment. This restricted confounding variables for data interpretation. Because of the extremely low prevalence of visually impaired students, the number of students included was small, N = 14.

The Assessment Instrument

Three different tasks (anagrams, line drawings, and puzzles) were specifically chosen to create two different kinds of success and failure experience. The anagrams represented an "academic-like" task which was perceived by the students as similar to reading and spelling in school. This perception of similarity to reading tasks should result in expectancies more in concert with those evoked by genuine reading or academic activities. The anagrams were chosen because they are sufficiently novel to be motivating and could be made to appear soluble when, in fact, they were not. Anagrams are a commonly used task for testing attributions and learned helplessness theory (Weiner, 1979, 1985a, 1985b; Seligman, 1975).

The line drawings/puzzles were chosen to provide a novel and nonacademic, apparently soluble task to see if expectancies, attributions, and persistence would vary from the "academic-like" task (anagrams). It was thought that puzzles were sufficiently similar in nature to line drawings to allow them to be used by the students who were blind and

unable to make the visual response required of the line drawing task.

Anagrams The anagrams used were three, four and five-letter words randomly reordered and Brailled or typed in large print on 5 x 8 index cards and placed in separate envelopes. None of the anagram words contained Braille contractions or short forms. All the soluble anagrams were formed from uncontracted Braille words fond in basal reader lists at the first, second, and third grade reading level. The insoluble anagrams were created by changing one letter of the soluble anagrams.

The anagram task requires the students to look at a sequence of printed or Brailled letters and attempt to rearrange the letters to form a word. This is a complex task which requires the same kinds of inter-sensory abilities required of reading. Students must discriminate the differences and similarities of one alphabet letter from another within the anagram. Visual or tactile memory is necessary for recognizing different patterns or configurations of letters in the anagrams which may form recognizable words, and for rearranging sequences of letters in the anagram to form meaningful word units.

Line Drawings The line drawings were geometric forms within squares, based on those used by Weiner (1979, 1985a, 1985b) and adapted by Butkowsky and Willows (1980). The insoluble forms were not discernible as insoluble to the naive student. Each bold line drawing was laser printed on an individual 8 1/2 x 11 sheet of paper and placed in an individual manila envelope.

The line drawing task is a visual-perceptual motor task which requires the students to trace the outlines of printed figures without recrossing any line. This task primarily requires visual-motor integrative abilities. Students must be able to plan and execute the

necessary motor patterns for tracing. Fine motor coordination is required to hold the marker, trace the lines of the figure, and make directional changes.

Puzzles The puzzles used were geometric forms in two, three, and four parts. The insoluble forms were not discernible as insoluble to the naive student. Each disassembled puzzle was placed on the table before the student. The puzzle task is a motor task which requires the student to tactually explore the parts (puzzle pieces) and to create a whole image (geometric shape). This task requires tactile-kinesthetic integrative abilities.

If the students perceived the anagrams as academic tasks, and the line drawings (puzzles) as nonacademic, then there could be great differences in expectancies, attributions and performance. Throughout testing the students seemed to perceive the tasks as different with anagrams being perceived as "like reading."

Procedural Sequence

Students were given a sample soluble task, followed by three insoluble anagram tasks and a final soluble task. This sequence followed each series of tasks: anagrams, line drawings, or puzzles. The students' time on each attempted trial was measured in seconds. Four procedural steps were used to obtain student time on task. These procedures were followed for the anagram tasks and for the three line drawing or puzzle tasks. It should be noted that the anagram tasks given to a student were given during one week and the line drawings or puzzle tasks were given one or two weeks later. Each student was tested by two different researchers, who were randomly assigned to different students each week.

Step One - Student Orientation Students were given an orientation for each type of task being presented.

Step Two - Introduce the Demonstration Soluble Task The task materials were placed in front of the student and the examiner gave the student the directions for completing the task. The examiner used a stopwatch to record the number of seconds taken for the student to complete the task. If the student failed the demonstration soluble task, the examiner gave the student another soluble task at a lower level of difficulty and recorded the time.

Step Three - Present the Three Insoluble Tasks Students were given three insoluble tasks. If students seemed to be slowing down at 3 minutes, they were asked *"Do you want to keep trying or do you want to go on to the next puzzle"?* A maximum of five minutes was given per puzzle. If they exceeded five minutes, they were encouraged to stop and the next insoluble task was given. The examiner used a stopwatch to record the number of seconds the students attempted each trial. This procedure was repeated until the student had attempted all three insoluble tasks. Step three yielded persistence time data on insoluble tasks, whereas, steps two and four yielded time to completion data on soluble tasks.

Step Four - Present the Final Soluble Task The task materials were placed in front of the student and the examiner gave the student the directions for completing the task. The examiner used a stopwatch to record the number of seconds the students attempted each trial. If a student failed the final soluble task, the examiner gave the student another task at a lower level of difficulty and recorded the time.

Definition and Analysis of Persistence Patterns

The analysis of student's persistence time on tasks was conducted by comparing the

time in seconds on the three insoluble anagram tasks and the three insoluble line drawings or puzzle tasks. This analysis answers three questions:

1. Does persistence time increase after failure?
2. Does persistence time decrease or remain constant after failure?
3. Does persistence time vary between State School and LEA students?

By comparing a student's persistence time on three insoluble anagram tasks and three insoluble puzzle-like tasks, it is possible to identify patterns of increased or decreased persistence time spent in trying to solve these tasks. The criteria used to determine the persistence pattern of students on the tasks were as follows:

I. Persistence Pattern

1. Persistence time increases after each failure or reaches a maximum established time of 5 minutes.
2. Persistence time on the third insoluble trial is greater than the time spent on both the first or second insoluble trials.

II. Mixed Patterns

1. Persistence time on the third insoluble trial is greater than the time spent on the second insoluble trial.
2. Persistence time on the second insoluble trial is greater than time spent on the first insoluble trial.
3. Average persistence time must be 60 seconds or more.

III. Non-Persistence Pattern

1. Persistence time decreases after each failure.

2. Persistence time on the second and third insoluble trials are less than or the same as the persistence time spent on the first insoluble trial.

Results

Persistence time on insoluble tasks varied greatly among the visually impaired students. Some students persisted no longer than four seconds per task, to as much as 325 seconds per task. There were no significant differences between students in the State School and mainstreamed LEA setting with respect to time on task or a particular type of Persistence Pattern. The cumulative data for all 13 students revealed the presence of all three kinds of time on task persistence patterns: 1) a Persistence Pattern; 2) a Mixed Pattern; and 3) a Non-Persistence Pattern.

Table 1-F presents the average time on task in seconds by the students who presented Persistence, Mixed Persistence, and Non-Persistence task patterns.

Persistence Patterns

Of the 13 visually impaired students in the study, four students (31%) presented *Persistence* patterns on both the anagram tasks and the line drawing or puzzle tasks. Two students were from the State School (A-2, A-8), and two students were from the LEA (L-3, L-4). The *Persister*group averaged 170 seconds per insoluble task, nearly three minutes per task, the maximum time for most students (see Table 1-F).

Non-Persistence Patterns

In contrast, four students (31%) presented *Non-Persistence* patterns while attempting to solve the three insoluble tasks. The *Non-Persistence* patterns showed a decreasing persistence time pattern on both the anagram and line drawing/puzzle tasks (see Table 1-

F). The *Non-Persistence* group consisted of students A-5, A-6, L-2, L-6, who averaged slightly over one minute per task. This was over a minute and a half less than the *persister* group.

Mixed Patterns

Five students (38%) presented a *Mixed Pattern* for persistence task while trying to solve the three insoluble tasks. The *Mixed Pattern* group consisted of one student (A-1) who had a *Persistence* pattern on the anagram tasks and a *Mixed Pattern* on the line drawing/ puzzle tasks. Two students had *Mixed Patterns* on both the anagram tasks and the line drawing or puzzle tasks (A-7, L-5). Two students were both, *Persisters* and *Non-Persisters* on either the anagram task or the line drawings/puzzle tasks (A-4, L-1) (See Table 1-F).

The *Mixed* pattern group averaged 111.5 seconds per task, almost one minute less than the *Persister group* and 42 seconds more than the *Non-Persister group* (see Table 1-F).

Number of Trials

A comparison of the number of trials undertaken by students completing the line drawing tasks revealed that the two *Persisters* made 22 attempts averaging 11 attempts per student (See Table 2-F). The number of attempts was 9 and 13. Both students made multiple attempts, took quick action and when they failed, asked for another copy of the line drawing task.

The three *Mixed Pattern* students completing line drawings made 21 attempts averaging 7 attempts each. The number of attempts ranged from 5 to 9. The three *Non Persisters* made 16 attempts averaging 5.3 attempts per student. The number of attempts ranged from 5 to 6, which is less than half the number of attempts made by the persister

group.

The students with *Persistence* patterns made more total attempts than students from the other two pattern groups. The *Non-Persisters* made fewer attempts than the students with *Mixed Patterns*. The data patterns of persistence time and number of attempted trials parallel one another; the *Persisters* tried longer and more often.

Significant Differences Between Patterns

A two sample t test was conducted for the test of difference across insoluble anagram and line drawing puzzle tasks. There was a significant difference ($t=6.49$, $p=.0006$) in the average persistence time of the students identified as persisters and non-persisters on the insoluble anagram tasks. The sample mean time of the persister students ($\bar{x}=177$ seconds) was higher than the sample mean time of the non-persister students ($\bar{x}=61$ seconds).

There was a significant difference ($t=5.28$, $p=.0019$) in the average persistence time of the students identified as persisters and non-persisters on the insoluble line drawing/puzzle tasks. The sample mean time of the persisters ($\bar{x}=155$ seconds) was higher than the sample mean time of the non-persisters ($\bar{x}=77$ seconds).

Potential Correlates to Persistence Patterns

An analysis was made of nine potential variables to determine if they might be related to the persistence patterns. These included:

1. Degree of Vision
2. Mobility
3. Intellectual Potential
4. Academic Performance

5. Reading Level

6. Social/Emotional Problems

7. Classroom Teacher Expectancy Ratings for Success

8. Classroom Teacher Expectancy Ratings for Failure

9. Background Information

No differences or trends were found between the four students in the *persister* group or for the four students in the *non-persister* group on these nine variables.

Discussion and Implications

The results of this study reveal that 69% of the visually impaired students included in this study either have a *Non-persistence* pattern or a *Mixed Pattern* of behavior while attempting to solve difficult (insoluble) tasks. Nine of 13 students in this study tended to reduce persistence time on task after failure. Yet it is precisely these students who need to spend additional time to master difficult tasks. There are four major implications which arise from this study.

First, teachers and parents should attend to the persistence time of visually impaired students when they are attempting difficult tasks. The number of minutes a student engages in each difficult task should be recorded. This information can be used to help teachers and parents identify specific tasks where persistence time needs to be increased.

Second, an analysis of repeated attempts on multiple tasks will enable teachers and parents to identify time on task persistence patterns, mixed patterns, or non-persistence patterns.

Third, it is important that teachers and parents be taught intervention strategies to

help students' increase persistence time on difficult tasks and change non-persistence or mixed patterns to strong persistent patterns.

Fourth, there are a number of potentially productive issues for further research on persistence patterns among visually impaired students:

a) With an increased number of students, would other kinds of persistence patterns be identified or would certain patterns appear more prominently?

b) What kinds of intervention strategies are most effective in increasing persistence time on difficult tasks?

c) The critical variables which result in a student developing one persistence pattern over another remains unexplained. This raises several interesting questions. Would a larger sample of high persistence and low persistence students reveal correlations with the nine variables investigated in this study? Are there other variables which should be studied? For example, perhaps factors such as a student's history of success and failures, or the qualitative feedback from parents, teachers, and peers should be examined. The origins of student persistence patterns is probably more complex, interactive, and subtle than the nine variables examined in this study.

In closing, it is important that parents and teachers observe students's performance to identify persistence patterns on task and provide as much positive feedback as possible to the student. Unless a student persists, he or she will not succeed. If a student does not succeed, he/she will never link persistence to success and they will not learn. As teachers and parents, we must develop students' persistence on difficult tasks and thus provide them with one of the most important keys to learning.

Table 1-F

TIME ON TASK IN SECONDS
Persistence Categories

PERSISTENCE CATEGORIES	ANAGRAMS N=13	LINE DRAWING/ PUZZLES N=13	TOTAL $\bar{x}$
PERSISTENCE PATTERNS			
A-2	207	196	
L-4	199	178	
A-8	168	120	
L-3	133	126	
TOTAL	**707**	**620**	**1,327**
$\bar{x}$	**177**	**155**	**170**
MIXED PATTERNS			
A-1	180	66	
L-1	175	64	
L-5	73	128	
A-7	68	120	
A-4	60	183	
TOTAL	**556**	**561**	**1,117**
$\bar{x}$	**111**	**112**	**111.5**
NON PERSISTENCE PATTERNS			
A-5	58	72	
A-6	47	97	
L-2	73	75	
L-6	67	63	
TOTAL	**245**	**307**	**552**
$\bar{x}$	**61**	**77**	**69**

Table 2-F

NUMBER OF TRIALS ON LINE DRAWING TASK

Persisters	Line Drawings	Mean No. of Trials
A-2	-	
A-8	13	
L-3	-	
L-4	9	
Total Number	22	11
Mixed Pattern		
A-1	5	
A-4	-	
A-7	-	
L-1	9	
L-5	7	
Total Number	21	7
Non Persisters		
A-5	5	
A-6	-	
L-2	5	
L-6	6	
Total Number	16	5.3

- = Puzzles given not line drawings.

APPENDIX G

Study Four
Attributions For Success and Failure

Study Four

Attributions For Success And Failure

The purpose of this study was to examine the attributional beliefs VI students held about *why* they succeeded or failed on "reading-like" anagram word tasks and line drawing or puzzle tasks.

Methodology

Selection of Subjects

Subjects were selected based on availability for extensive participation more than for representativeness of the population to be assessed. Because this was a developmental project, it was necessary to have cooperation from subjects to a degree far beyond that which is required to obtain "norms" for student behavior. Thus, no random sampling was utilized. Rather, the students at the state school site and the local educational agency site were studied to determine those who would be available for most in-depth study. From the students who were available, the goal was to select a sample to represent the variety of blind and visually impaired students in these settings.

For this research project, a low vision group (with visual acuities between 20/200 and the ability to count fingers at 3' or greater) and a blind group (whose visual acuities range from the ability to count fingers at 3' or less to an inability to perceive light) were selected. These two groups have distinctly different visual abilities and experiences.

Subjects were required to meet certain criteria regarding grade level, intelligence, and

disability. Visually impaired students were in grades 3-6 and within one year of appropriate chronological age for that grade. This eliminated retardation or giftedness as a variable. Finally, visually impaired students were selected who were not multiply handicapped, i.e., have any identified handicapping condition other than their visual impairment. This restricted confounding variables for data interpretation. Because of the extremely low prevalence of visually impaired students, the number of subjects included was small, n = 14.

The Assessment Instrument

Three different tasks (anagrams, line drawings, and puzzles) were specifically chosen to create two different kinds of success and failure experience. The anagrams represented an "academic-like" task which was perceived by the students as similar to reading and spelling in school. This perception of similarity to reading tasks should result in expectancies more in concert with those evoked by genuine reading or academic activities. The anagrams were chosen because they are sufficiently novel to be motivating and could be made to appear soluble when, in fact, they were not. Anagrams are a commonly used task for testing attributions and learned helplessness theory (Weiner, 1979, 1985a, 1985b; Seligman, 1975). The line drawings/puzzles were chosen to provide a novel and nonacademic, apparently soluble task to see if expectancies, attributions, and persistence would vary from the "academic-like" task (anagrams). It was thought that puzzles were sufficiently similar in nature to line drawings to allow them to be used by the students who were blind and unable to make the visual response required of the line drawing task.

Anagrams The anagrams used were three, four and five-letter words randomly reordered and Brailled or typed in large print on 5 x 8 index cards and placed in separate

envelopes. None of the anagram words contained Braille contractions or short forms. All the soluble anagrams were formed from uncontracted Braille words fond in basal reader lists at the first, second, and third grade reading level. The insoluble anagrams were created by changing one letter of the soluble anagrams.

The anagram task requires the subjects to look at a sequence of printed or Brailled letters and attempt to rearrange the letters to form a word. This is a complex task which requires the same kinds of inter-sensory abilities required of reading. Subjects must discriminate the differences and similarities of one alphabet letter from another within the anagram. Visual or tactile memory is necessary for recognizing different patterns or configurations of letters in the anagrams which may form recognizable words, and for rearranging sequences of letters in the anagram to form meaningful word units.

Line Drawings The line drawings were geometric forms within squares, based on those used by Weiner (1979, 1985a, 1985b) and adapted by Butkowsky and Willows (1980). The insoluble forms were not discernible as insoluble to the naive subject. Each bold line drawing was placed on an individual 8 1/2 x 11 sheet of paper and placed in an individual manila envelope.

The line drawing task is a visual-perceptual motor task which requires the subjects to trace the outlines of printed figures without recrossing any line. This task primarily requires visual-motor integrative abilities. Students must be able to plan and execute the necessary motor patterns for tracing. Fine motor coordination is required to hold the marker, trace the lines of the figure, and make directional changes.

Puzzles The puzzles used were geometric forms in two, three, and four parts. The

insoluble forms were not discernible as insoluble to the naive subject. Each disassembled puzzle was placed on the table before the subject. The puzzle task is a motor task which requires the subject to tactually explore the parts (puzzle pieces) and to create a whole image (geometric shape). This task requires tactile-kinesthetic integrative abilities.

If the students perceived the anagrams as academic tasks, and the line drawings (puzzles) as nonacademic, then there could be great differences in expectancies, attributions and performance. Throughout testing the students seemed to perceive the tasks as different with anagrams being perceived as "like reading."

Procedural Sequence

Student's attributions were elicited by two methods. First, an open-ended question was asked following each of three tasks: a) soluble anagrams or line drawing/puzzles, b) insoluble anagrams or line drawing/puzzles, and c) final soluble anagrams or line drawing/puzzles. Each student received each test series on different weeks given by different researchers. The test series order was randomly assigned. Following the success experiences on soluble trials, the student was asked "*Why do you think you did well on this task?*" Following failure on the open-ended insoluble trial experiences, the student was asked: "*Why do you think you had trouble with this task?*" Each child's answer was recorded verbatim by the examiner.

The second method for eliciting attributions was a structured response card choice method. Each subject was presented with five cards. One attribution statement was printed or Brailled on each 5 x 8 index card. The cards were placed in random order in front of the student. The cards read:

Success Cards	Failure Cards
I am good at this. [ability]	I am not good at this. [effort
I tried hard. [effort]	I could have tried harder. [effort]
It was an easy task. [task ease]	It was a hard task. [task difficulty]
I was lucky. [luck]	I was unlucky. [luck]
Because of other reasons.	Because of other reasons.

The experimenter pointed to each card and the subject was asked: "*What do you think caused you to do (not do) so well on these puzzles? Do you think you did (did not) do so well because you are (are not) good at this (ability), because you tried harder (could have tried harder) (effort), because it was an easy (a hard) task (task difficulty), because you were lucky (unlucky) (luck), or because of other reasons? Point to the card or cards which say why you think you did (did not) do so well on this task.*"

After the student selected a card, the experimenter asked "*Any others?*" No student was forced to select more than one card, but multiple choices were permitted to reflect the multiple determinacy of events in achievement situations (Butkowsky & Willows, 1980). The cards the student selected were noted on the recording form. If the student selected several/cards, he/she was asked to specify the card representing *the most important reason.*

Results

The results section includes analyses of the: attributional language of VI students; open-ended attributional categories; and attributional responses give after initial success, after failure; and after a final success on anagrams and line drawing/puzzle tasks. Also included are analyses of the stability of responses. Data describing structured response choices to structured attribution cards are presented in the Addendum (page 22-G).

Attributional Language

One of the more striking characteristics of the majority of the VI students was the brevity and poverty of their open-ended attributional responses. The 13 subjects made a total of 39 attributional responses. Of these, 28 responses were one to five words (72%); 9 responses were from six to ten words (23%); and two responses were from 11 to 19 words (5%). The average number of words per response was three words in the 1-5 word category, 7.2 words in the 6-10 word category, and 15.5 words in the 11-19 word category (see Table 1-G).

Similar results were obtained for the 39 attributional responses made to the line drawing/puzzle tasks, 28 responses were 1-5 words (72%); six responses were 6-10 words (15%); and five responses were from 11-19 words (13%). The average number of words per response by category was 3.7 words in the 1-5 category, 7.2 words in the 6-10 category, and 17.8 words in the 11-19 category (see Table 2-G). Only two student responses to anagrams and five to line drawing puzzles were 11 or more words; 15 responses were 6-10 words.

Of the 142 total responses statements made to the open-ended attribution questions by the VI students, 13 responses (9.2%) were *"I don't know"*. A more in-depth analysis of the

responses revealed that nine (62.9%) of *"I don't know"* statements were made by LEA students. Eight (61.5%) of the *"I don't know"* statements were made by three LEA female students. More *"I don't know"* statements were made by low vision students (9, 62.9%) than by blind students.

Five open-ended responses (3.5%) were uncategorizable (unable to be placed in an attributional category) and one response (.7%) was a procedural description, not an attribution. A larger number and percentage of non-categorizable responses were made in answer to the attributional open-ended questions on anagrams (12, 16%) than on line drawing/puzzles (7, 10.4%). All five uncategorizable statements were made by the low vision students.

Many VI students seemed puzzled by the attribution questions and appeared unfamiliar with causational inquiries, i.e., they seemed unaccustomed to thinking about "**why**" things happened and had few words to explain it. This interpretation seems supported by the fact that VI students selected attributional responses given to them on the structured cards which were substantially different from those responses given spontaneously. The cards seemed to cue and influence the students and result in responses not contemplated when the first spontaneous response was sought in the open-ended format.

In fact, a comparison of the first open-ended attribution response and "the most important" card choice for each student found 49 (63%) of the 78 responses differed from one another. In other words, only 29 (37%) of the students used the same type of attributional response for both the open-ended question and the structured response card selection. Therefore, a separate analysis of the structured response cards was conducted and

appears in the Addendum (page 22-G).

Open-Ended Attributional Categories

In an effort to select the most valid data for analysis, the primary attributional data source used was the very first open-ended attribution response each student gave to each question. The open-ended responses were rated by two independent evaluators into seven attributional categories. Four of the categories were those typically used in attributional research and, specifically by Weiner, (1985a, 1985b).

Attributional Category	Student Response Language
INTERNAL-	
stable	ability
unstable	effort
EXTERNAL-	
stable	task
unstable	luck

Three other categories were added to the analysis to reflect the student's responses: a) "I don't know" b) "uncategorizable" meaning the response could not be interpreted as a meaningful category; and c) procedural description a category used when a student explained what he/she did but gave no causation statement. Those students who initially responded with "I don't know" but were able to give a second categorizable attribution answer were reported as giving an attribution. Those students who gave no second response, gave another

"I don't know," or an uncategorizable response were reported in those categories.

The 13 VI students made a total of 142 open-ended attributional responses for anagrams and line drawing/puzzle tasks. There were no significant differences between the total number of attributions responses given to the two tasks, nor to the success and failure conditions.

Attributions After Initial Success: Open-Ended Responses

Anagram Tasks In answer to the open-ended questions "*Why do you think you did well on this task?*" nine of the thirteen visually impaired students (69.2%) attributed their success on the initial soluble anagram to *internal factors* (see Table 3-G). They believed their success on this "reading-like" task was caused by something inside themselves. Most students (38.5%) believed their success was caused by *internal stable* factors, a quality inside themselves which was permanent. Examples of these internal-stable ability attributions were "I can find words in the cards; If you know the first letters or if you know how it's spelled it just pops into your mind; I was good at it".

In comparing the success attributions on anagrams between the VI students in the two settings, more State School students attributed their success primarily to *internal stable* factors (42.8%) while LEA students believed their success resulted equally from *internal stable* (33.3%) and *internal unstable* factors (33.3%).

Line Drawing/Puzzle Tasks The results of the analysis of the success attributions on the soluble line drawing/puzzle tasks were similar to those on soluble anagram tasks. Nine of the thirteen VI students (69.2%) attributed their success to *internal* factors (see Table 3-G).

Almost three fourths (71.4%) of the students at the State School believed their success

was caused by *internal stable* factors, something inside themselves which was permanent. The VI students expressed these positive attributions about their abilities on line drawing/puzzles with statements such as: "I am good at it; I know what I'm doing."

The VI students in the LEA setting also believed their line drawing/puzzle success was caused primarily by *internal* factors. However, they attributed their successes primarily to *internal unstable* (50%) factors, something inside themselves which was impermanent or changeable, typically effort. Examples of these *internal unstable* attributional statements are: "(I'm) concentrating"; "I tried harder." These causes of success come from within the student (*internal*) but may change with circumstance or task (*unstable*). No State School students attributed success on soluble line drawings to *internal unstable* factors.

Combined Initial Success Attributions When success attributions are combined for State School and LEA VI student groups and for anagram and line drawing/puzzle tasks, 69.2% of the attributional statements were *internal* with a larger percentage of students attributing success to *internal stable* factors (42.3%) (see Table 4-G).

Attributions After Failure: Open-Ended Responses

Anagram Tasks In answer to the open-ended question "*Why do you think you had trouble on this task?*", nine of the 13 VI students (69.2%) attributed their failure on the insoluble anagram tasks to *external factors* (see Table 5-G). The students believed their failure was caused by something outside themselves. Eight of the 13 students (61.5%) believed their failure was caused by *external stable* factors, something which was outside them and relatively permanent. Examples of these *external stable* attributional statements were: "It was hard; Lots of letters," both references to the difficulty level of the task.

In comparing the failure attributions for anagrams given by VI students at the State School and those in LEA settings, approximately 60-70% of each group attributed failure to *external stable* factors (State School, 57.1%; LEA, 66.6%).

Line Drawing/Puzzle Tasks When asked to explain their failure on line drawing/puzzle tasks, VI students from both settings attributed their failure primarily to *external stable* factors (76.9%), task difficulty. Examples of student statements are: "Well, some (line drawings) you can't get from one side to the other; hard(er) to go through without going over lines". State School students attributed these failures 71.4% to *external stable factors*; LEA students, 83.3% (see Table 5-G).

Combined Failure Attributions When failure attributions are combined across both groups for anagram and line drawing/puzzle tasks, 73.1% of the attributional responses were *external stable*, task difficulty. Most students believed their failure was a result of the task, not some factor within themselves (see Table 4-G).

Attributions After Final Success: Open-Ended Responses

Anagram Tasks VI students' attributional statements explaining the cause of their success on the final soluble anagram tasks were split evenly between *internal* (46.1%) and *external* (46.1%) factors with *stable* factors being more commonly mentioned than *unstable*. Examples of *internal stable* (ability) statements were: "I'm good at it; 'cause I know them". Examples of *external stable* (task ease) attributions were: "It was easy; because I think that part was easy." (See Table 6-G).

Comparing responses from State School students and LEA students, LEA students believed their success came primarily from *external stable* sources (50%), something outside

themselves such as the ease of the task. Conversely, State School students believed their success on anagrams came primarily from within themselves (*internal stable,* 42.8%).

Line Drawing/Puzzle Tasks Student's attributional statements explaining the cause of their success on the final soluble line drawing/puzzle tasks were primarily *internal* (61.5%), personal ability or effort (see Table 6-G).

Comparing the students by setting, the LEA students attributed success primarily to effort *internal unstable* factors (50%) as exemplified by such statements as: "I looked at it until I figured it out; I tried hard". The State School students attributed their success equally to *internal stable* (42.8%) and *external stable* (42.8%) factors. Examples of the responses were: "I'm good at this; I'm fast" (*internal stable*) and "It was pretty easy" (*external stable).*

Combined Final Success Attributions Overall, when VI students' responses from both settings over both tasks are combined, there is a split between *internal* and *external* responses with *internal* responses receiving a slightly higher percentage of responses (53.8%) than *external* responses (42.3%) (see Table 4-G).

<u>Stability of Responses</u>

Learned helplessness research uses an analysis of the stability of subject responses as an index of the predictability of future expectancies of success or failure. For example, if a student believes his/her success is caused by ability (*internal stable*) factors, ability is viewed as a positive self-perception and permanent factor which will cause the student to predict similar success in comparable situations the future. Beliefs that success is caused by task ease, *(external stable)* factors would lead students to believe that success is controlled by factors outside themselves so they would take no pride in the success and have no expectation

to succeed in the future.

Stable attributions explaining failure suggest that failure is more difficult to overcome. When failure is attributed to lack of personal ability (*internal stable*) or task difficulty (*external stable*), these factors remain relatively constant and the student expects little future success.

All open-ended and structured card responses were analyzed for stability. The data are shown in Tables 7-G to 9-G.

Stability of Attributions for Initial Success On open-ended responses for initial soluble tasks, most students (61.5%) verbalized a *stable* response to explain their success on anagrams and line drawing/puzzles. Most of these stable responses were ability (*internal stable*, 42.3%). An attribution of success to ability typically indicates a positive self-perception (see Table 7A-G).

Similarly, on the structured response cards, the majority of the students attributed their success to *stable* causes (46.1%), primarily ability (*internal stable*, 30.8%). Therefore, most students took personal credit for their success (see Table 7B-G).

Stability of Attributions for Failure On open-ended responses to failure, most students (80.8%) selected a *stable* factor as the cause of their failure with the majority selecting task difficulty (69.2%), an *external stable* factor, as the primary reason. Attributing failure to *stable* causes implies that this failure is permanent and outside the control of the person and, therefore, more difficult to overcome (see Table 8A-G). Structured cards responses were similar with primarily *stable* choices (50%) with 46.1% selecting the *external stable* task difficulty card (see Table 8B-G).

Stability of Attributions for Final Success Students' open-ended responses to final

success were primarily *stable* (69.2%) with the group split between selecting ease of task, *external stable* cause for success (38.5%) and the remainder selecting ability, *internal stable* causes (30.8%) (see Table 9A-G). Structured card response findings were not similar. Only a small percentage of students selected a *stable* card (19.2%). Of those who did, most of those selected the ability card, *internal stable* (15.4%) (see Table 9B-G).

These data suggest that three different subgroups of students exist to explain success on the final soluble task. One group believes their own ability caused their success and, therefore, are taking credit for their own success and showing a positive self-perception. This group is reflected by the ability attributions 30.8% of the time in the open-ended responses and the ability card selection 15.4% of the time.

The second group of students selected task ease as the major reason for their success. This finding suggests a lack of personal pride in their success and implies a negative self-perception of personal ability. This group was represented by the task ease open-ended response 38.5% of the time and the task ease card choice for 3.8% of the group.

The third group of students attributed most of their final success to *unstable*, primarily effort. In fact 30.8% of the open-ended responses and 46.1% of the structured response cards were effort responses. The finding suggests an understanding of the personal effort involved in success but a recognition of its impermanent, changing nature.

Summary of Stability Responses Overall, the VI students showed a strong pattern of attributing failure to external causes, task difficulty; very few students took personal responsibility for failure.

Interestingly, the VI students showed a positive pattern of belief in personal ability or

effort to explain initial success. However, explaining success on the final soluble task after a failure experience, VI students showed a mixed pattern of attributing success to task ease, ability and effort. This is particularly interesting in that it contrasts with the success data from the initial soluble. During an initial success experience, VI students saw their own ability and effort as the causes of their success. After a failure experience followed by a final success, VI students fell into three groups with some viewing their success as caused by the ease of the task, their ability, or effort.

These data seem to suggest that the failure experience shifted VI students thinking. Does the drop in the percentage of students attributing their final success to their own ability reflect the impact of the failure experience? Did this brief encounter with failure shake the students' faith in themselves and their ability? If so, does this imply that students have little experience with failure and are, therefore, highly reactive to it? Or, do they have minimal experience with understanding failure and its normalcy and necessity for learning?

Discussion and Implications

Some interesting trends and implications emerge from these quantitative and qualitative data analyses. However, the generalizability of these data are questionable because of the small number of students. Attributions for initial success, failure and final success are discussed with implications and questions for further research in each section.

Initial Success Attributions

In general, after an initial successful experience with a soluble task, VI students believed their success was caused by something inside themselves. State School students consistently

attributed their success to factors such as personal ability. LEA VI students believed their successes came from internal factors as well. However, the LEA students saw ability and effort as equally important causes for their success.

According to attributional theory and research, success believed to be the result of *internal stable* factors such as ability and self-perception reflects a strong positive sense of pride. *Internal unstable* attributions reflect an understanding of the personal effort required to do a task successfully, i.e., an insight into the link between personal effort and success on the task. Both of these causes imply that VI students saw themselves as the source of success and should expect future success.

State school students seem to have a stronger sense of pride in their ability and take more personal credit for their successes than LEA students. Perhaps the difference between the groups is explained by the increased competitiveness of the LEA environment which may result in the belief that personal ability is not sufficient; that is, that effort is required to succeed in the general education classroom.

Classroom observations revealed that LEA students had constant frustrations, few instances of positive feedback or support and, for the most part, constant competition from other students. Observations of the State School Students revealed few frustrations, less competitiveness among students and constant positive feedback and support by teachers. Perhaps this helps explain why LEA students identified effort as a more important cause of their success than inherent personal ability. Lack of positive feedback on ability from their teachers and peers may guide this belief. Or, VI students in LEA classes may be told more often by teachers and peers that effort is the key to success or, at least, a socially acceptable

response.

Conversely, perhaps State School students have an inflated view of their personal ability as a reason for their success. Perhaps this results from the continuous positive feedback from their teachers and lack of assertive competition by more capable peers forcing constant self-reappraisal.

These implications raise questions for further study on larger groups:

1. Do other VI students in State Schools and LEA settings have these same positive attributional belief patterns to explain their successes?
2. Are the attributional statements of the VI Students a reflection of their "true" beliefs or are they a face-saving/socially acceptable response learned through social experience?
3. Is the absence of much variability in responses an accurate reflection of the similarity of student beliefs? Or is it a result of insufficient experience/understanding/knowledge with attributional/causational language?

Failure Attributions

All VI students consistently attributed their failure to causes outside themselves. Most believed their failure was due to the nature of task, i.e., "that it was too hard." There were no significant differences between the State School and LEA students' attributional beliefs about the causes of their failure nor any differences between their responses on anagrams or line drawings or puzzles.

According to attributional theory, blaming failure on *stable* factors outside one's control decreases the expectancy of future success. Externalizing the blame for failure also may serve

as an ego-saving device, a healthy sign of skepticism about the difficulty level of the task or a student's inability to understand or accept his/her role in a failure.

These implications also raise interesting questions for further study on larger groups of VI students:

1. Would these same patterns of externalizing failure be found among a larger group of VI Students?
2. Would these same attributional patterns identified on these tasks be found in response to actual failure experiences in the classroom?
3. Would older VI students show greater internalization, self-blame for failure, as the literature and teacher observation seem to note?
4. Do peers, parents and teachers contribute to or "model" this pattern of blaming the task or the environment for the failure of VI students?

<u>Final Success Attribution After Failure Experience</u>

Perhaps the most interesting were the success attributions to the final soluble task after failure experiences.

Anagrams Tasks The State School students maintained exactly the same percentage of *internal-stable* attributions for explaining initial and final soluble anagrams. They believed their success in both situations was a result of their personal ability. LEA students attribution pattern shifted dramatically from initial to final anagram. They believed their initial anagram ("reading-like") success was caused equally by *internal-stable* and *internal-unstable* responses; all causes within themselves. They took credit for their success either through personal

ability or effort. However, on the final soluble anagram, their attributions shifted to 50% believing that their final success was caused by external stable factors, the nature or ease of the task. They no longer took personal pride in their success; they believed the success was caused by sources out of their control.

Line Drawing Puzzles Tasks Another interesting comparison in attributional responses can be seen between the initial and final soluble line drawing/puzzle.

State School students strongly believed their initial success was due to *internal-stable* factors, personal ability on the line drawing/puzzle task (71.4%). However, on similar soluble tasks after failure, only 42.8% of the students maintained their belief in their own personal ability as the cause of their success. After failure, 42.8% of the students attributed their success to the task itself, *external stable factors.* Conversely, the LEA students maintained their belief over both soluble experiences that their success came from *internal unstable* causes, their own effort.

These two shifts seem to reflect new insights/perspectives on success causation following failure experience. Did a brief failure experience on anagrams the LEA students' confidence that their own ability and effort could explain success on similar anagram tasks? These data seem to reflect that. Similarly, did the brief failure experience on line drawing/puzzles cause State School students to lose faith in their abilities so that they now believe it was the ease of the task controlling their final success?

Further research is needed to answer the following questions:

1. Why did students shift their initial beliefs about their success after a brief failure experience?

2. Why did LEA and State School students' belief shifts differ?
3. Are VI students allowed to fail and given feedback about what it means to fail?
4. Do differences in the amount and type of teacher feedback contribute to the attributional shift differences found between the LEA and State School students?
5. Does competition from a more assertive, competitive "visually-able" peer group in the general education classrooms contribute to the LEA students' attributional beliefs?

Conclusions

There are two major implications of this study. First, teachers and parents should help their visually impaired student become aware of the reasons **why** they achieve success or fail at school, at home, or on the playground. Students should be taught causational thinking, the reasons why one succeeds or fails and the vocabularies and language to explain it. A deliberate and systematic attempt to help students realistically link their abilities, effort, and outside variables to success or failure will enable them to develop a more accurate perception of what they are able or unable to do and why.

The second major implication is that parents and teachers both in the general education classroom and in State Schools should carefully examine the kind and quality of experiences and feedback they are providing visually impaired students about why they are succeeding or failing. Teachers and parents may be contributing to their students' problems rather than helping them develop an appropriate attributional base for their successes or failures. Perhaps a change in how we respond to their successes or failures and the way we model coping with our own successes or failures will help these students to meet more effectively the inevitable challenges of adolescence and adulthood.

ADDENDUM

Structured Response Attribution Cards

In analyzing the structured response attribution card data, it was decided that the most valid card data response was that elicited after the card selection process when the student was asked to select the card representing "*the most important reason*" for success or failure. The findings reported here reflect the most important reason chosen by each student for each of the three procedures for anagrams and line drawings: initial soluble, insoluble, final soluble. Tables 10-G to 13-G display these data.

Attributions After Initial Success: Structured Response Card Choices

Anagrams Ten of 13 VI students (76.9%) selected the *internal unstable* (effort) or *internal stable* (ability) card to explain their first success (see Table 10-G). Overall, this parallels the open-ended response pattern where 69.2% gave an *internal* response. More LEA and State School students selected the *internal unstable* (effort) card rather than the *internal stable* (ability) card. This was the reverse of the open-ended responses.

Line Drawing Tasks Nine of 13 VI students (69.2%) selected an *internal stable* (ability) or *internal unstable* (effort) card to explain their line drawing/puzzle success. Most State School students believed their success was caused by their own ability (*internal stable* 57.1%). Most LEA students (*internal unstable*) selected effort (66.7%) as the attributional explanation (see Table 10-G). These findings exactly parallel those on the open-ended responses.

Combined Structured Responses to Success Overall, VI students attributed their initial success on soluble tasks to *internal* causes (73.1%) with effort (*internal unstable*, 42.3%) being chosen slightly more often than ability (*internal stable*, 30.8%) (see Table 11-G). This

"internality" preference is reflected also in the open-ended responses. However, in the spontaneous choices, ability was mentioned more often than effort.

Attributions After Failure: Structured Response Card Choices

Anagrams VI students' card choices to explain failure on anagrams were almost evenly split between internal and external attributions (internal, 46.1%; external, 53.8%) (see Table 12-G).

State School students equally selected effort (*internal unstable*, 28.6%) and task difficulty (*external unstable*, 28.6%) as causes for failure. LEA students were split evenly between effort (50%) and task difficulty (50%) as reasons for their failure.

These responses vary rather substantially from the findings on the open-ended responses to anagram failure where students primarily selected *external stable*, task difficulty (61.5%) to explain their failure. There were no open-ended attributional references to effort by LEA students and only one by a State School student.

Line Drawing/Puzzles Most VI students explained their failure on line drawing/puzzle tasks by selecting the task difficulty card (53.8%). LEA students explained their failure primarily with task difficulty (66.7%) and State School students were split evenly between task difficulty (42.8%) and effort (42.8%) (see Table 12-G).

Overall, these findings parallel those on the open-ended responses. The major difference being the increased number of State School students who spontaneously mentioning task difficulty (71.4%) rather than effort.

Combined Structured Responses to Failure Most VI students attributed their failure on both tasks to *external* factors (53.8%) with task difficulty (*external stable*, 46.1%) as the

primary choice (see Table 11-G). This parallels the combined open-ended responses with task difficulty as the highest percentage (73.1%). The second ranking choice was ability (11.5%), a smaller percentage and different choice from the effort card.

Attributions After Final Success: Structured Response Card Choices

Anagrams Twelve of 13 VI students (92.3%) selected the effort or ability card to explain their final success on anagrams with the majority selecting effort (*internal unstable*, 76.9%). This pattern occurred for both State School (71.4%) and LEA students (83.3%) (see Table 13-G).

This finding differs substantially from the findings on the open-ended response where internal and external attributions were given equally, (internal, 46.1%; external, 46.1%). On open-ended responses, State School students believed their success was due primarily to ability (42.8%); LEA students thought the ease of the task (50%) was the primary reason for success.

Line Drawing/Puzzles Most VI students, eight of 13 (61.5%) selected an *internal* card, effort or ability, to explain this final success on line drawing/puzzles. State School and LEA students primarily selected the effort card (State School, 42.8%; LEA, 50%) (see Table 13-G).

This finding parallels the open-ended responses overall. Most students' spontaneously attributed their success (61.5%) to *internal* causes. However, State School students were evenly split between ability (*internal stable*, 42.8%) and task ease (*external stable*, 42.8%). The same percentage of LEA students attributed their success to effort (50%) in the open-

ended as in the structured card choices.

Combined Structured Responses to Final Success When data are combined over task and setting, most VI students (76.9%) attributed their success to *internal* card choices, first to effort, (61.5%) then to ability, (15.4%) (see Table 11-G).

In contrast, on open-ended responses, students mentioned task ease (38.5%) ability (30.8%) and effort (30.8%) almost equally.

Table 1-G

Number of Words Per First Attributional Response on Anagram Tasks

N = 13

TASKS	NUMBER OF RESPONSES PER STUDENT RESPONSE					
	1-5 Words		6-10 Words		11-19 Words	
	N Student Responses	Total N Words Used	N Student Responses	Total N Words Used	N Student Responses	Total N Words Used
Initial Soluble Anagram	7	18	4	31	2	31
Insoluble Anagrams	9	25	4	27	0	0
Final Soluble Anagrams	12	41	1	7	0	0
Total N Response	28	84	9	65	2	31
X N Words per Student	3.0		7.2		15.5	

Table 2-G

Number of Words Per First Attributional Response on Line Drawing/Puzzle Tasks

N = 13

TASKS	NUMBER OF WORDS PER STUDY OF STUDENT RESPONSE					
	1-5 Words		6-10 Words		11-19 Words	
	N Student Responses	Total N Words Used	N Student Responses	Total N Words Used	N Student Responses	Total N Words Used
Initial Soluble Line Drawing/Puzzles	9	35	2	13	2	28
Insoluble Line Drawing/Puzzles	8	30	2	15	3	61
Final Soluble Line Drawing/Puzzles	11	38	2	15	0	0
N of Student Responses	28	103	6	43	5	89
X Words	3.7		7.2		17.8	

Table 3-G*

Percentage of Open-Ended Responses in Each Attributional Category for Initial Soluble Tasks

ATTRIBUTION CATEGORIES	ANAGRAMS				LINE DRAWINGS/ PUZZLES			
	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13
INTERNAL ATTRIBUTION				(9) **69.2%**				(9) **69.2%**
STABLE (Ability)	(3) 42.8%	(2) **33.3%**	(5) **38.5%**		(5) **71.4%**	(1)16.7% (3)**50.0%**	(6) 46.1%	
UNSTABLE (Effort)	(2) 28.6%	(2) **33.3%**	(4) 30.8%				(3) 23.1%	
EXTERNAL ATTRIBUTION				(4) 30.8%				(3) 23.1%
STABLE (Task)	(1) 14.3%	(1) 16.7%	(2) 15.4%		(1) 14.3%	(2) 33.3%	(3) 23.1%	
UNSTABLE (Luck)	(1) 14.3%	(1) 16.77%	(2) 15.4%					
PROCEDURAL DESCRIPTION					(1) 14.3%		(1) 23.1 %	(1) 7.77%

* Note: Entries may not sum to 100 due to rounding.

Table 4-G*

Summary of Combined Open-Ended Attributional Categorical Data

ATTRIBUTION CATEGORIES	COMBINED PERCENTAGES FOR MAJOR ATTRIBUTIONAL CATEGORIES N = 26			COMBINED TASK PERCENTAGES N = 26		
	Initial Soluble Tasks	Insoluble Tasks	Final Soluble Tasks	Initial Soluble Tasks	Insoluble Tasks	Final Soluble Tasks
INTERNAL ATTRIBUTION	(18) **69.2%**	(5) 19.2%	(14) **53.8%**			
STABLE (Ability)				(11) **42.3%**	(3) 11.5%	(8) 30.8%
UNSTABLE (Effort)				(1) 27.0%	(2) 23.2%	(6) 23.1%
EXTERNAL ATTRIBUTION	(7) 26%	(19) **73.1%**	(11) **42.3%**			
STABLE (Task)				(5) 19.2%	(18) **69.2%**	(10) 38.5%
UNSTABLE (Luck)				(2) 7.7%	(1) 3.8%	(1) 3.8%
PROCEDURAL DESCRIPTION	(1) 3.8%			(1) 3.8%		
DON'T KNOW		(1) 3.8%	(1) 3.8%		(1) 3.8%	(1) 3.8%
UNCATEGORIZABLE		(1) 3.8%			(1) 3.8%	

* Note: Entries may not sum to 100 due to rounding.

Table* 5-G

Percentage of Open-Ended Responses in Each Attributional Category for Insoluble Tasks

ATTRIBUTION CATEGORIES	ANAGRAMS				LINE DRAWINGS/ PUZZLES			
	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13
INTERNAL ATTRIBUTION				(3) 23.1%				(2) 15.4%
STABLE (Ability)	(1) 14.3%	(1) 16.7%	(2) 15.4%			(1)16.7%	(1) 7.7%	
UNSTABLE (Effort)	(1) 14.3%		(1) 7.7%		(1) 14.3%		(1) 7.7%	
EXTERNAL ATTRIBUTION				(9) **69.2%**				(10) **76.9%**
STABLE (Task)	(4) **57.1%**	(4) **66.6%**	(8) **61.5%**		(5) **71.4%**	(5) **83.3%**	(10) 76.9%	
UNSTABLE (Luck)	(1) 14.3%		(1) 7.7%					
DON'T KNOW		(1) 16.7%	(1) 7.7%	(1) 7.7%				
UNCATEGORIZABLE					14.3%		(1) 7.7%	(1) 7.7%

* Note: Entries may not sum to 100 due to rounding.

Table 6-G*

Percentage of Open-Ended Responses in Each Attributional Category for Final Soluble Tasks

ATTRIBUTION CATEGORIES	ANAGRAMS				LINE DRAWINGS/ PUZZLES			
	SS N=7	LEA N=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13	SS N=7	LEA N=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13
INTERNAL ATTRIBUTION				(6) **46.1%**				(8) **61.5%**
STABLE (Ability)	(3) **42.8%**	(1) 16.6%	(4) 30.8%		(3) **42.8%**	(1) 16.6%	(4) 30.8%	
UNSTABLE (Effort)	(1) 14.3%	(1) 16.6%	(2) 15.4%		(1) 14.3%	(3) **50.0%**	(4) 30.8%	
EXTERNAL ATTRIBUTION				(6) **46.1%**				(5) **38.5%**
STABLE (Task)	(2) 28.6%	(3) **50.0%**	(5) 38.5%		(3) **42.8%**	(5) **33.3%**	(5) 38.5%	
UNSTABLE (Luck)		(1) 16.6%	(1) 7.7%					
DON'T KNOW	(1) 14.3%			(1) **7.7%**				

* Note: Entries may not sum to 100 due to rounding.

Table 7-G

7A-G. Stability of Open-Ended Attributions for Initial Success

	Anagrams n = 13	Line Drawing/Puzzle n = 13	Combined N = 26
Internal Stable (Ability)	(5) 38.5%	(6) 46.1%	(11) **42.3%**
External Stable (Task)	(2) 15.4%	(3) 23.1%	(5) 19.2%
Total Stability Score	(7) 53.8%	(9) 69.2%	(16) **61.5%**

7B-G. Stability of Structured Response Choice Attributions for Initial Success

	Anagrams n = 13	Line Drawing/Puzzle n = 13	Combined N = 26
Internal Stable (Ability)	(4) 30.8%	(4) 30.8%	(8) **30.8%**
External Stable (Task)	(2) 15.4%	(2) 15.4%	(4) 15.4%
Total Stability Score	(6) 46.1%	(6) 46.1%	(12) **46.1%**

Table 8-G

8A-G. Stability of Open-Ended Attributions for Failure

	Anagrams n = 13	Line Drawing/Puzzle n = 13	Combined N = 26
Internal Stable (Ability)	(2) 15.4%	(1) 7.7%	(3) 11.5%
External Stable (Task)	(8) 61.5%	(10) 76.9%	(18) **69.2%**
Total Stability Score	(10) 76.9%	(11) 84.6%	(21) **80.8%**

8B-G. Stability of Structured Response Choice Attributions for Failure

	Anagrams n = 13	Line Drawing/Puzzle n = 13	Combined N = 26
Internal Stable (Ability)	(1) 7.7%	0	(1) 3.8%
External Stable (Task)	(5) 38.5%	(7) 53.8%	(12) **46.1%**
Total Stability Score	(6) 46.1%	(7) 53.8%	(13) **50%**

Table 9-G

9A-G. Stability of Open-Ended Attributions for Final Success

	Anagrams n = 13	Line Drawing/Puzzle n = 13	Combined N = 26
Internal Stable (Ability)	(4) 30.8%	(4) 30.8%	(8) **30.8%**
External Stable (Task)	(5) 38.5%	(5) 38.5%	(10) **38.5%**
Total Stability Score	(9) 69.2%	(9) 69.2%	(18) **69.2%**

9B-G. Stability of Structured Response Choice Attributions for Final Success

	Anagrams n = 13	Line Drawing/Puzzle n = 13	Combined N = 26
Internal Stable (Ability)	(2) 15.4%	(2) 15.4%	(4) **15.4%**
External Stable (Task)	0	(1) 7.7%	(1) 3.8%
Total Stability Score	(2) 15.4%	(3) 23.1%	(5) **19.2%**

Table 10-G*

Percentage of Structured Responses in Each Attributional Category: Initial Soluble Tasks

ATTRIBUTION CATEGORIES	ANAGRAMS				LINE DRAWINGS/ PUZZLES			
	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13
INTERNAL ATTRIBUTION				(10) **76.9%**				(9) **69.2%**
STABLE (Ability)	(2) 28.6%	(1) 16.7%	(3) 23.1%		(4) **57.1%**	0	(4) 30.8%	
UNSTABLE (Effort)	(4) 57.1%	(3) 50.0%	(7) 53.8%		(1) 14.3%	(4) **66.7%**	(5) 38.5%	
EXTERNAL ATTRIBUTION				(3) 23.1%				
STABLE (Task)	(1) 14.3%	(1) 16.7%	(2) 15.4%		(1) 14.3%	(1) 16.7%	(2) 15.4%	(2) 15.4%
UNSTABLE (Luck)		(1) 16.7%	(1) 7.7%				0	
OTHER REASONS					(1) 14.3%	(1) 16.7%	(2) 15.4 %	(2) 15.4%

*Note: Entries may not sum to 100 due to rounding.

Table 11-G*

Summary of Combined Percentage of Structured Attributional Categorical Data

ATTRIBUTIONAL CATEGORIES	COMBINED PERCENTAGES FOR MAJOR ATTRIBUTIONAL CATEGORIES N=26			COMBINED TASK PERCENTAGES N=26		
	Initial Soluble Tasks	Insoluble Tasks	Final Soluble Tasks	Initial Soluble Tasks	Insoluble Tasks	Final Soluble Tasks
INTERNAL ATTRIBUTIONS	(19) **73.1%**	(10) 38.5%	(20) **76.9%**			
STABLE (Ability)				(8) **30.8%**	(1) 3.8%	(4) **15.4%**
UNSTABLE (Effort)				(1) **2.3%**	(9) 34.6%	(16) **61.5%**
EXTERNAL ATTRIBUTIONS	(5) 19.2%	(14) **53.8%**	(3) 11.5%			
STABLE (Tasks)				(4) 15.4%	(12) **46.1%**	(1) 3.8%
UNSTABLE (Luck)				(1) 3.8%	(2) 7.7%	(2) 7.7%
OTHER REASONS	(2) 7.7%	(2) 7.7%	(3) 11.5%	(2) 7.7%	(2) 7.7%	(3) 11.5%

*Note: Entries may not sum to 100 due to rounding.

178

179

Table 13-G*

Percentage of Structured Responses in Each Attributional Category: Final Soluble Tasks

ATTRIBUTION CATEGORIES	ANAGRAMS				LINE DRAWINGS/ PUZZLES			
	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13
INTERNAL ATTRIBUTION				(12) **92.3%**				(8) **61.5%**
STABLE (Ability)	(2) 28.6%	0	(2) 15.4%		(2) 28.6%	0	(2) 15.4%	
UNSTABLE (Effort)	(5) **71.4%**	(5) **83.3%**	(10) **76.9%**		(3) **42.8%**	(3) **50.0%**	(6) 46.1%	
EXTERNAL ATTRIBUTION				(1) 7.7%				(2) 15.4%
STABLE (Task)	0	0	0		(1) 14.3%	0	(1) 7.7%	
UNSTABLE (Luck)	0	(1) 16.77%	(1) 7.7%		0	(1) 16.7%	(1) 7.7%	
OTHER REASONS	0	0	0		(1) 14.3%	(2) 33.3%	(3) **23.1 %**	(3) **23.1%**

*Note: Entries may not sum to 100 due to rounding.

Table 12-G*

Percentage of Structured Responses in Each Attributional Category: Insoluble Tasks

ATTRIBUTION CATEGORIES	ANAGRAMS				LINE DRAWINGS/ PUZZLES			
	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13
INTERNAL ATTRIBUTION				(6) **46.1%**				(4) 30.8%
STABLE (Ability)	(1) 14.3%	0	(1) 7.7%		0	0	0	
UNSTABLE (Effort)	(2) **28.6%**	(3) **50.0%**	(5) 38.5%		(3) **42.8%**	(1) 16.7%	(4) 30.8%	
EXTERNAL ATTRIBUTION				(7) **53.8%**				(7) **53.8%**
STABLE (Task)	(2) **28.6%**	(3) **50.0%**	(5) 38.5%		(3) **42.8%**	(4) **66.7%**	(7) 53.8%	
UNSTABLE (Luck)	(2) 28.6%	0	(2) 15.4%		0	0	0	
OTHER REASONS	0	0			(1) 14.3%	(1) 16.7%	(2) 15.4 %	(2) 15.4%

*Note: Entries may not sum to 100 due to rounding.

Table 13-G*

Percentage of Structured Responses in Each Attributional Category: Final Soluble Tasks

ATTRIBUTION CATEGORIES	ANAGRAMS				LINE DRAWINGS/ PUZZLES			
	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13	SS n=7	LEA n=6	$\bar{x}$ N=13	Combined $\bar{x}$ N=13
INTERNAL ATTRIBUTION				(12) **92.3%**				(8) **61.5%**
STABLE (Ability)	(2) 28.6%	0	(2) 15.4%		(2) 28.6%	0	(2) 15.4%	
UNSTABLE (Effort)	(5) **71.4%**	(5) **83.3%**	(10) **76.9%**		(3) **42.8%**	(3) **50.0%**	(6) 46.1%	
EXTERNAL ATTRIBUTION				(1) 7.7%				(2) 15.4%
STABLE (Task)	0	0	0		(1) 14.3%	0	(1) 7.7%	
UNSTABLE (Luck)	0	(1) 16.77%	(1) 7.7%		0	(1) 16.7%	(1) 7.7%	
OTHER REASONS	0	0	0		(1) 14.3%	(2) 33.3%	(3) **23.1 %**	(3) **23.1%**

*Note: Entries may not sum to 100 due to rounding.

APPENDIX H

Study Five
Teacher Interviews

Study Five

Teacher Interviews

The purpose of this study was to investigate the opinions, beliefs and perceptions of regular classroom (LEA) and special education (State School) teachers towards teaching students with visual impairments. This aspect of the study was qualitative in nature and conducted simultaneously with the development of instrumentation to assess expectations, persistence and attributions for students with visual impairments.

Methodology

This section provides a description of the methodology including: instrument development; the selection of subjects; and the procedure for analyzing ethnographic data.

Instrumentation

The development of instrumentation began with a literature survey to identify an instrument(s) that might be adapted for use in interviewing teachers. No currently available instrument provided the structure or content required by this aspect of the study, therefore, the project staff developed and pilot tested a specially designed Teacher Interview Form and accompanying quidelines and techniques for administering the instrument.

The instrument developed was a twenty-four (24) item questionnaire that was organized into component areas of interest to the researchers. These areas were summarized as: background information; teacher efficacy; general perspectives on success;

specific - target students' success; teacher's beliefs about success attributions; teacher's perceptions of target student persistence; teachers expectations for success; teachers' perceptions of student's beliefs about success attributions; general perspectives on failure; specific - target student failure; teacher's beliefs about failure attributions; teacher's perception of target student persistence; teacher expectations for target student failure; teacher's perceptions of student's belief about failure attribution, and; teacher's perceptions of special education services.

Each teacher was introduced to the survey with the following statement:

We're interested in asking you about how you think and work with visually impaired students. I'd like to chat with you for about 20 to 30 minutes. Some of the questions you may have been asked before, others you may not have. This is not an assessment and there is no right answer. I hope that you don't mind that we're taping this. We will be transcribing it and taking out all the identifying information.

Subjects

The Teacher Interview Instrument was administered to 13 teachers (6 teachers at the state school and 7 teachers in local educational agency settings) during February and March of 1991 (see Figure 1).

FIGURE 1

Sources of Teacher Data

	VI Certified (n = 7)	Non-VI Certified (n = 6)
State School (n = 6)	5	1
Local educational agency (n = 7)	2	5

Each teacher was contacted individually by a project staff member to schedule a time and place convenient to that teacher for the interview. Interviews were typically conducted in the teachers' classrooms during planning periods, lunch hour, or after school hours. All of the teachers appeared relaxed and comfortable with the interviewer and freely provided detailed responses to the interviewer's questions.

Ethnographic Analysis

The teacher interview data were reviewed by project staff and 10 questions from the interview were selected for in depth analyzes. These data were not subjected to a statistical analysis, but rather were analyzed to obtain teacher descriptors across a range of teacher

beliefs, perceptions and activities. The sample size available encouraged in depth analysis of responses from each teacher as opposed to standard statistical analysis. For example, t-tests and analyses of variance were not useful as "grounded descriptors" in explaining differences in responses between types of teachers and teaching sites. There were no null or research hypotheses stated at the outset of this portion of the research. Stating prior hypotheses is more common with confirmatory projects where statistical tests will determine whether the hypotheses are retained or rejected. As Erickson (1986) has suggested, the research questions and data collection should be in an evolving, consistent relationship, and a pilot research project has not evolved to the point where the exact hypotheses should be stated. Therefore, the general goal of this portion of the research study was left open to allow flexibility in the data collection.

Results

This section provides data on teacher responses to ten interview questions designed to elicit opinions, beliefs and perceptions towards teaching children with visual impairments.

Interview Questions

Table 1-H presents teacher responses to the question: **Teachers are asked to do many things. Of all the things that you do as a teacher, what do you think is the most important?** It can be seen from this table that there was a wide range of responses from teachers in both settings. What is interesting to note, however, is that local educational agency teachers may view their role more broadly as indicated by their response rate (2.3 responses on average) when compared to State School teachers (1.7 responses on average). It is also interesting to compare the top response categories of each group. Local

educational agency teachers indicated that "providing one-on-one direct instruction" was the most important thing they do in the classroom. State school teachers responded that "creating an environment where kids feel safe to learn and make mistakes" was their most important teaching role.

Table 2-H identifies teacher responses to the question: **What kinds of things make it most difficult to do what you think is important?** It is clear that the two groups view this issue very differently. Seven of the eight State School responses indicated "systems problems" which most often included a descriptive reference to lack of time for providing all the needed services to students with visual impairments, while local educational agency teachers were evenly split between "systems problems" and "home situation" as being their major difficulties. It is clear that a State School is generally able to control difficult or problem home situations because of its residential component.

Table 3-H presents another interesting contrast between the two groups as they responded to the question: **What kinds of students are most difficult to teach?** Teachers in LEA settings view visually impaired students from problem homes or who are unmotivated as being the most difficult students to teach. State school teachers see the range of additional problems that confound teaching a student with a sensory impairment as being problematic for them. No single concomitant condition stood out in the State School responses.

When asked: **When it comes right down to it, do you believe that teachers in general (your colleagues) really make a difference with students who are difficult to teach?** the teacher responses between the two groups were very congruent (see Table 4-H). The one

response that distinguishes the two groups was categorized as "The right teaching characteristics". State School teachers indicated this category and "Teacher determination" as their predominant choices. The "right teaching characteristics category" can best be summarized by a representative statement drawn from a state school teacher - "if teachers look for individual differences and teach to those differences." Only one LEA teacher gave this category of response.

Table 5-H presents teachers responses to the question: **Do you think it is possible for you personally to get through to even the most difficult-to-teach students/visually impaired students?** Responses from the two groups of teachers were very similar on this question, with both groups viewing "using appropriate teaching strategies" as most important and "establishing good interpersonal relationships" or "motivating the students" as second in importance. No significant differences between the groups were noted.

Tables 6-H and 7-H asked teachers to identify what visually impaired students do well at and what they tend to have trouble with or fail at. Responses from local educational agency teachers were too minimal to provide much insight into the perceptions of that group. State School teachers responded to both questions with a range of strengths and problem areas which have previously been characterized and discussed in the literature (i.e., visually impaired students do well socially and have the most difficulty with conceptual learning, specifically spatial and abstract concepts).

Table 8-H presents the results of the question: **What is the role of the special education teacher with your visually impaired student(s)?** The interesting finding from this question is that there was almost an even split among the local educational agency teacher's

responses. There was no clear understanding of the teacher of the visually impaired's role as either a "remedial" tutor working in an academic curriculum with students or a support person working primarily on "compensatory" skills.

Results from the question: **How compatible do you perceive the instruction for the VI student in the special education room and your room?** are presented in Table 9-H. Three of the seven local educational agency respondent's felt that there was compatibility and a high level of coordination between the regular education teacher and the visually impaired special education teacher. The remaining teachers either did not believe that the two programs were compatible (2 respondents) or did not know or could not answer the question (2 respondents). Therefore, 4 respondents or 57% felt instruction between regular education and visually impaired teachers was either incompatible (2; 29%) or unknown (2; 29%). Only 3 (42%) saw compatibility between the two instructional settings.

Table 10-H presents a tally of local educational agency respondents' experiences in teaching students with visual impairments (2 teachers had previous experience and 3 teachers had no previous experience) and a self report regarding their perception of the difficulty teaching students with visual impairments (2 teachers perceived teaching students with visual impairments as difficult and 3 teachers did not perceive teaching these students as being difficult).

Discussion and Implications

These data present pictures of regular classroom local educational agency teachers and certified teachers of students with visual impairments from the state school that are similar, yet quite different. Clearly the sample size is small and broad generalizations are

not appropriate. However, certain distinct differences between the groups seem to emerge from the data.

All the teachers interviewed believed that they were capable of getting through to even the most problematical students. However, teachers from the state school indicated that they are very uncomfortable with the lack of time available in the school day to provide all the needed compensatory skills required by their students. Local educational agency teachers agreed, to a lesser extents, that time constraints are a serious problem, as they are concerned with providing one-on-one academic instruction to students. Local educational agency teachers felt strongly that overly protective parents and difficult home situations contributed equally to their inability to do what they viewed as important in the classroom (direct instruction).

Local educational agency teachers are, without question, seldom exposed to students with visual impairments. Their understanding of the difficulties associated with teaching these students is very different from that of teachers who are especially prepared to teach students who are visually impaired. Local educational agency teachers generally viewed unmotivated students as the most difficult to teach. Those students are "the ones who don't seem to want to do their work no matter how interesting you think you make it. Those are the most frustrating students to teach." Vision teachers tended to identify a range of additional learning and behavioral problems along with multiple handicapping conditions as those added variables which made teaching most difficult. The differences in responses clearly can be tied to experience with, and knowledge about, the broad population of visually impaired students in schools today.

A clear implication of these data is that local educational agency teachers in the regular classroom are not as involved as they need to be in the total educational process for students with visual impairments. Only 43% of them perceived that the education that they provided visually impaired students was compatible with the services provided by the vision specialist. That is certainly not a figure that would indicate either full participation in the development of the student's IEP or an ongoing dialogue with the vision specialist assigned to the classroom. A lack of communication between regular classroom teachers and special education teachers serving students with visual impairments seems to be an underlying and unresolved problem, although it was not explicitly mentioned by teachers in the interview process.

It is important, therefore, that we continue to try to identify areas of discrepancy between the opinions, beliefs, and perceptions of regular classroom and special education teachers toward their students with visual impairments. In order to accomplish this, we will need to interview and observe many more teachers and develop a structure of communications between all parties. Only then will we be assured that continuity of programming for students with visual impairments can be provided in our regular classrooms. Mainstreaming will only work effectively if there is congruence between teachers' beliefs and attitudes.

TABLE 1-H

Teachers are asked to do many things. Of all the things that you do as a teacher, what do you think is the most important?

CATEGORY	STATE SCHOOL N = 6	PUBLIC SCHOOL N = 7	REPRESENTATIVE COMMENT
Needs Assessment	1 (10%)	2 (13%)	Developing short term objectives for the children.
Creating a Learning Environment	4 (40%)	3 (19%)	Creating an environment where kids feel safe to learn and make mistakes.
Create a Desire for Learning	2 (20%)	1 (6%)	Giving the children a positive attitude towards self.
Setting Expectations for Students	1 (10%)	1 (6%)	Being fair and having high expectations.
Direct Instruction	2 (20%)	5 (31%)	Providing one-on-one direct instruction.
Total Responses	10	16	

NOTE: Totals indicate multiple responses by teachers.

TABLE 2-H

What kinds of things make it most difficult to do what you think is important?

CATEGORY	STATE SCHOOL N = 6	PUBLIC SCHOOL N = 7	REPRESENTATIVE COMMENT
Systems Problems	7 (88%)	3 (38%)	Time constraints - there just isn't enough time to do everything.
Classroom Management	0	1 (12%)	Classroom management issues.
Lack of Preparation by Classroom Teachers	0	1 (12%)	Classroom teachers who are not organized or prepared.
Home Situations	1 (12%)	3 (38%)	Overly protective parents and lack of parental support.
Total Responses	8	8	

NOTE: Totals indicate multiple responses by teachers.

TABLE 3-H

What kinds of students are most difficult to teach?

CATEGORY	STATE SCHOOL N = 6	PUBLIC SCHOOL N = 7
ADD/VI	1 (12.5%)	0
VI/Language Problems/Delays	1 (12.5%)	0
Low Vision Students	1 (12.5%)	1 (12.5%)
LD/VI	2 (25%)	0
Spoiled, Overly Protected VI Students	1 (12.5%)	0
Congenitally Blind	1 (12.5%)	1 (12.5%)
Blind/Multiply Impaired	1 (12.5%)	0
VI/Low Self-Esteem	0	1 (12.5%)
Unmotivated VI Students Who Don't Try or Respond	0	3 (37.5%)
VI Students from Problem Homes	0	2 (25%)
Total Responses	8	8

NOTE: Totals indicate multiple responses by teachers.

TABLE 4-H

When it comes right down to it, to you believe that teachers in general (your colleagues) really can make a difference with students who are difficult to teach.

CATEGORY	STATE SCHOOL N = 6	PUBLIC SCHOOL N = 7	REPRESENTATIVE COMMENT
Yes, with: The right teacher attitudes and beliefs.	2 (22%)	2 (33%)	If the teachers attitude is positive and they believe all kids can be taught.
Teacher determination.	3 (33%)	2 (33%)	I really believe it takes a lot of teacher effort to reach difficult to teach children.
The right teaching characteristics.	3 (33%)	1 (17%)	If teachers look for individual differences and teach to those differences.
The proper training.	1 (11%)	0	If the teacher has the right training they can make a difference.
The presence of resource personnel.	0	1 (17%)	Resource personnel coming into the classroom helps in reaching difficult to teach children.
Total Responses	9	6*	

NOTE: Totals indicate multiple responses by teachers.

* One teacher's answer was determined to be non-responsive to the question.

TABLE 5-H

Do you think it is possible for you personally to get through to even the most difficult-to-teach students/visually impaired students?

CATEGORY	STATE SCHOOL N = 6	PUBLIC SCHOOL N = 7	REPRESENTATIVE COMMENT
Yes, by: Developing realistic expectations.	1 (11%)	0	As long as I am realistic regarding what I try and teach the children.
Trying to motivate the students.	2 (22%)	1 (14%)	I find what is motivating to the child to keep them on task with me.
Using appropriate teaching strategies.	4 (44%)	4 (57%)	I provide lots of experiences.
Establishing good inter-personal relationships with student.	2 (22%)	2 (29%)	I work to build trusting, open relationship with the children.
Total Responses	9	7	

NOTE: Totals indicate multiple responses by teachers.

TABLE 6-H

What tasks do visually impaired students tend to do well?

CATEGORY	STATE SCHOOL* N = 6	REPRESENTATIVE COMMENT
Auditory Learning Tasks	1 (17%)	Use of the auditory channel for learning.
Socialization Skills	2 (33%)	They have good socialization skills.
Oral Communication	1 (17%)	They are good at sharing oral information.
Thought Sequencing	1 (17%)	They are able to sequence their thoughts and actions in ways sighted children don't have too.
Learn Through Manipulation	1 (17%)	They learn but when they can manipulate concrete objects.
Total Responses	6	

*Local educational agency teachers were not asked this question because it was felt their experience with visually impaired students was too limited to allow an informed response.

TABLE 7-H

What tasks do visually impaired students tend to fail at or have difficulty with?

CATEGORY	STATE SCHOOL* N = 6	REPRESENTATIVE COMMENT
Conceptual Learning	3 (33%)	They need to be taught spatial and other abstract concepts.
Pragmatics of Language	1 (11%)	The nuances of body language and body movement.
Daily Living and Social Skills	1 (11%)	Poor daily living skills impact on other aspects of the child's life.
Competitive Tasks	1 (11%)	They are not good at competitive tasks.
Independence Tasks	1 (11%)	They are not as independent as other children.
Academic Tasks	2 (22%)	They have trouble with subjects like social studies, science, and spelling.
Total Responses	9	

NOTE: Totals indicate multiple responses by teachers.

*Local educational agency teachers were not asked this question because it was felt their experience with visually impaired students was too limited to allow an informed response.

TABLE 8-H

What is the role of the special education teacher with your visually impaired student(s)?

CATEGORY	PUBLIC SCHOOL N = 5*	REPRESENTATIVE COMMENT
Teaches the Academic Curriculum	3 (60%)	They work with the student on classroom assignments.
Teaches Supportive Activities	2 (40%)	They do reading and literature aspects of Braille.

* Only the regular classroom teachers responded to this question since there is no separate visually impaired resource person at the state school.

TABLE 9-H

How compatible do you perceive the instruction for the VI student (target student's name) in the special education room and your room?

CATEGORY	PUBLIC SCHOOL N = 7*
Compatible	3 (43%)
Not Compatible	2 (29%)
Don't Know or Can't Answer	2 (29%)

* All local educational agency teachers (visually impaired resource and regular classroom) were asked to respond from their perspective.

TABLE 10-H

Do you have experience teaching VI students and do you find VI students difficult to teach?

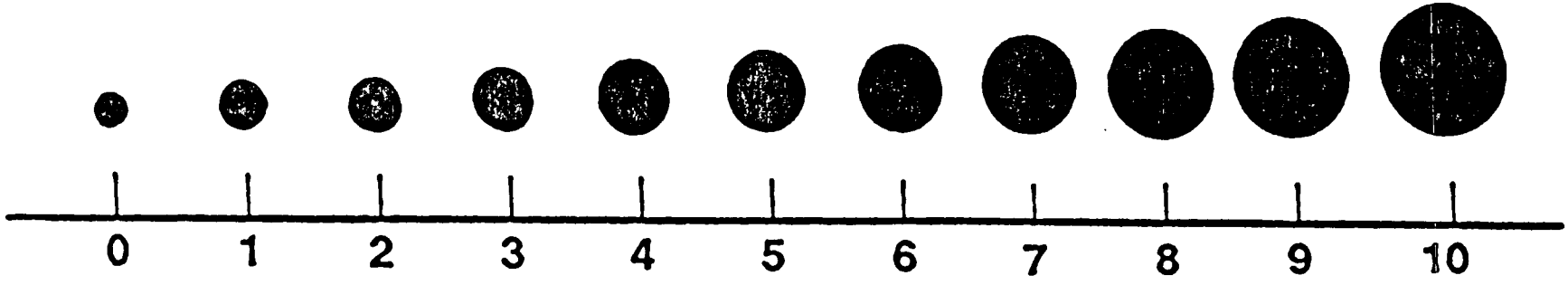
CATEGORY	Yes	No	Total N = 5*
VI Experience	2 (40%)	3 (60%)	5
Difficult to Teach	2 (40%)	3 (60%)	5

* Only local educational agency, regular classroom teachers were asked this question. Those teachers responding that VI students were difficult to teach split on the VI experience response, with one teacher indicating no previous experience teaching VI students and one indicating a year's experience.

APPENDIX I

Expectancy of Success Line

EXPECTANCY OF SUCCESS LINE



All Wrong

All Right

APPENDIX J

Dweck Effort/Ability Subscale of the Intellectual
Acheivement Responsibility (IAR) Scale

APPENDIX J

DWECK'S EFFORT/ABILITY SUBSCALE OF THE INTELLECTUAL ACHIEVEMENT RESPONSIBILITY (IAR) SCALE (CRANDALL ET AL., 1965)

3. When you have trouble understanding something in school is it usually

   A. Because the teacher didn't explain it clearly, or

   B. Because you didn't listen carefully?

4. When you read a story and can't remember much of it, is it usually

   A. Because the story wasn't written well, or

   B. Because you weren't interested in the story?

8. Suppose a person doesn't think you are very bright or clever,

   A. Can you make him change his mind if you try to, or

   B. Are there some people who will think you're not very bright no matter what you do?

11. Suppose you study to become a teacher, scientist, or doctor and you fail. Do you think this would happen

   A. Because you didn't work hard enough, or

   B. Because you needed some help, and other people didn't give it to you?

14. When you find it hard to work arithmetic or math problems at school, is it

   A. Because you didn't study well enough before you tried them, or

   B. Because the teacher gave problems that were too hard?

15. When you forget something you heard in class, is it

A. Because the teacher didn't explain it very well, or

B. Because you didn't try very hard to remember?

19. When you don't do well on a test a school, is it

A. Because the test was especially hard, or

B. Because you didn't study for it?

23. Suppose you don't do as well as usual in a subject at school. Would this probably happen

A. Because you weren't as careful as usual, or

B. Because somebody bothered you and kept you from working?

33. Suppose you're not sure about the answer to a question your teacher asks you and the answer you give turns out to be wrong. Is it likely to happen

A. Because she was more particular than usual, or

B. Because you answered too quickly?

34. If a teacher says to you, "try to do better", would it be

A. Because this is something she might say to get pupils to try harder, or

B. Because your work wasn't as good as usual?

EC 305672

Procurement Number: HC23A00100
Grant Number: H023A00100
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Competition Title: Small Grants Program

Title: LEARNED HELPLESSNESS IN CHILDREN WITH VISUAL HANDICAPS: A PILOT STUDY OF EXPECTATIONS, PERSISTENCE AND ATTRIBUTIONS

Performed by: THE UNIVERSITY OF ARIZONA COLLEGE OF EDUCATION
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10	0
50	0

Monitoring begin: 8/15/90

Monitoring end: 8/14/91

Beginning Fiscal Year: 1990

Abstract

Purpose: The project will develop practical assessment instruments to measure the "learned helplessness" syndrome in visually impaired children, and to develop a conceptual intervention model for classroom use.

Method: Two literature searches will be conducted to identify procedures to be adapted to diagnose "learned helplessness" in the visually impaired; and identify intervention strategies for "learned helplessness". The assessment instruments will be field tested, and data collection will occur in public and private schools in the Tucson Unified School District. The data from student observations, interviews, and from their test performance will be scored and analyzed.

Anticipated Products: An intervention model for blind students which increases expectancies for success, extends persistence on difficult tasks, and replaces negative beliefs with more accurate beliefs about causes of success or failure.

Target Descriptors

Target Age Group:
All Ages or not Relevant (NRA)

Other Descriptors:
Children (KID). Experimental or Research Setting (EX). Location not Applicable (NRG). Personal Characteristics (CHA). Severity not Applicable (NRV). Social Skills (SOC). Visually Impaired (VH).

Creation Date: 5/30/97 Last Update: 9/23/97

EC 305 672

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