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Causal Attribution and Dimension Differences Between Sixth-Grade Urban Middle School Students Who Pass and Students Who Fail Reading on the Virginia Literacy Passport Test

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CAUSAL ATTRIBUTION AND DIMENSION DIFFERENCES BETWEEN SIXTH GRADE URBAN MIDDLE SCHOOL STUDENTS WHO PASS AND STUDENTS WHO FAIL READING ON THE VIRGINIA LITERACY PASSPORT TEST

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ABSTRACT

CAUSAL ATTRIBUTION DIFFERENCES BETWEEN SIXTH GRADE URBAN MIDDLE SCHOOL STUDENTS WHO PASS AND STUDENTS WHO FAIL READING ON THE VIRGINIA LITERACY PASSPORT TEST

Elsie Perry Daniels
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Attribution theory, which focuses on student beliefs about why they succeed or fail, was investigated with 220 sixth grade students who were required to pass the Virginia Literacy Passport test. Part I of this study investigated the reliability and validity of Causal Dimension Scale II (McAuley et al., 1992) when it is used with a sixth grade preadolescent population. Part II investigated student attributions for performance outcomes on the reading portion of the Virginia Literacy Passport test. This study researched the hypothesis that middle school students who passed the Virginia Literacy Passport Test (LPT) reading test would attribute their successful outcome to more internal, stable and controllable causes than students who did not pass the test. Reliability coefficients for CDSII were within Nunnally's (1967) acceptable range for new instruments. Factor analysis supported Russell's hypothesized two factor structure of personal and external control. However, in the main study, three instead of four factors emerged with personal control and locus appearing to measure similar constructs. As predicted, t-tests results indicated that the students who passed attributed their outcome more to internal, stable, and controllable causes. ANOVA results indicated no significant differences between gender and ethnicity, however, there was a significant interaction between minority and nonminority males and females. Curriculum implications include

affective education and attribution retraining for the students and their parents. Urban policy implications include cross-curriculum reading instruction, staff development initiatives to educate teachers about the role of causal attributions in motivating students, and parental and community involvement in reading enrichment programs.

This dissertation is dedicated to the people who inspired me the most,

my mother, Jeannette W. Perry and father, Herbert G. Perry, Sr.

"Dad" died December 14, 1994, shortly after I completed my comprehensive exams.

In 1925, my father had to drop out of school in the third grade. For all of my elementary and high school years, I remember Dad working two jobs, an unskilled laborer by day and always a cab driver. Even though he worked seemingly around the clock to support six children, I remember the times Dad enrolled in night classes and asked me to help him. He always had to drop out because of work schedule conflicts. However, he impressed upon me the importance of getting an education. He always told me that I could be anything I wanted to be.

I discussed with him the fanciful notion of getting a doctorate in this stage of my life, and he said to me,

"Go ahead and get it. I'll sit down at the cab stand and tell everybody,

My baby girl is a doctor."

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CHAPTER I

INTRODUCTION

Background

Psychologists have long been investigating an attribution model of motivation centered around the theory that humans are motivated to find a causal explanation for events that occur in their lives. Harold H. Kelley (Weiner, 1992), a leading psychologist in attribution theory posited that humans are motivated to "attain cognitive mastery of the causal structure of the environment," and that individuals are scientists trying to understand the causal structure of the world (p. 193). Motivational psychologists, such as Sigmund Freud, argue that there are two fundamental principles of action or motive forces that explain an individual's causal reasoning, (a) hedonism (pleasure-pain principle), and (b) understanding the environment and oneself (p.222). Hedonism is a self-serving attribution bias that operates for ego enhancement, ego defensiveness and benefactance. According to the concept of the hedonic bias, people tend to take more credit for success than they take responsibility for failure (p.244). This pattern of ascriptions maximizes the pleasure linked with success and minimizes the pain generated by failure. Hedonic biasing of causal attributions occurs because (a) the individual wants to look good, (b) it is ego-enhancing to take credit for success rather than to ascribe success externally, and (c) it is ego-defensive to place fault externally rather than on the self (p. 245).

Previous research that has focused on investigating attribution theory as it relates to achievement and motivation indicates that characteristics other than cognitive skills

may affect an individual's performance on achievement tasks (Antaki & Brewin, 1982; Bar-Tal, Golberg & Knaani, 1984; Weiner, 1986). Causal ascriptions have psychological and affective consequences. The motivational assumption of self-serving ascriptions assumes that attributions influence emotions and that causal knowledge is functional, thereby guiding subsequent action (Weiner, 1992, p. 245). Previous research studies indicate a connection between causal attributions and achievement-related behavior. The latent goal of an individual in seeking causal knowledge is that of effective management of himself and his environment (Kelley, 1971).

Attribution theorists dogmatically proclaim their convictions concerning the issues of causal perception. Causes are not directly observable. Therefore, to reach a veridical understanding of causation, the theorists have employed data gathering methodologies such as (a) gathering consistency and consensus information, (b) applying causal rules, and (c) using contextual information to reach a rational causal decision (Weiner, 1992). Three general programs of research have emerged from the analysis of causal perception.

1. Perceived causes have been specified with particular consideration given to a distinction between internal or personal causality and external or environmental causality.
2. General laws have been developed that relate antecedent information and cognitive structures to causal inferences.
3. Causal inferences have been associated with various indexes of observed behavior.

According to Bernard Weiner (1992, 1986), a leading attribution theorist, an outcome, negative or positive, causes an outcome dependent affect. Following a negative or positive outcome, a search for causality is instigated (Antaki & Brewin, 1982; Weiner, 1986). Weiner's attributional model of achievement related behavior incorporates causal antecedents, causal dimensions, affective, and cognitive consequences of particular self-ascriptions. An individual's attributions depend on many factors, including the contextual features of the situation (intentional or unintentional), enduring beliefs and expectancies of the attributor (personal esteem), and hedonic factors that result in ascriptions favorable to the attributor (Weiner, 1992 p. 236). Even though causality is inferred, causal schemata, or general rules that relate causes and effects, are elicited (Weiner, 1992). According to Kelley (as cited in Weiner, 1992, p. 238), these rules, which are built up from prior experiences, are activated by appropriate environmental cues and enable the person to transcend situations in which the available information is limited.

Based on Weiner's attribution model, two general categories of antecedents influence students' causal perceptions (a) own personal dispositions (e.g., personality tendencies, demographic status, and causal schemata), and (b) external (environmental) information available to them (e.g., own performance, others performance, constraints and nature of the achievement task, parents; or others influence; and teachers influence: Antaki, & Brewin, 1982; Weiner, 1992, p. 236). Once the causal ascriptions are made, they can be classified according to three dimensions (a) locus of causality, (b) stability, and (c) controllability (Antaki & Brewin, 1982; Graham, 1991; Weiner, 1986). The locus of a cause influences self-esteem and pride. The stability of a cause influences the

temporal aspects of expectancy of future success or failure (Weiner, 1986, p.163). Controllability of a cause influences emotions. In a preponderance of attribution studies, the perceived causes of success at achievement-related activities are ability, immediate and long term effort, task characteristics, intrinsic motivation, teacher's competence, mood, and luck (Weiner, 1986, p.37).

Weiner (1986) contended that once the causal ascription is made, the cause is positioned in dimensional categories. Applying Weiner's attributional model to students' responses about their Literacy Passport Test (LPT) outcome, it is expected that their ascriptions will occur in the dimensional spaces of (a) locus of causality (internal or external), (b) stability (stable or unstable), and (c) controllability (controllable or uncontrollable). If success is anticipated, then actual success will tend to result in an internal ascription, inasmuch as the behavior is consistent with past outcomes. Conversely, if failure is inconsistent with prior outcomes, an entity (external) attribution is made. In the attributional framework, expectancy and affect are determined by prior causal ascriptions. Internal ascriptions for success enhance self-esteem more than external ascriptions, while external ascriptions for failure maintain self-worth relative to internal ascriptions (Weiner, 1992, 1986).

In the school context, ability, immediate and long-term effort, task characteristics, intrinsic motivation, teacher's competence, mood, and luck are an agreed-upon set of causes of success and failure (Weiner, 1992). Consistent with the attributionists' theory, the way students feel about their achievement performance is based on their past experiences with tests and previous school activities. Research findings intimate that

positive ascriptions are more predictive of performance improvement. Failure to pass a mandatory exam significantly alters the student's academic path. This elevates the importance of LPT outcome attributions because of the adaptations necessary for future success (Weiner, 1986). Identifying a cause and formulating a future plan of action benefits the students.

Importance of Reading

> If a child in a modern society like ours doesn't learn to read, he doesn't make it in life. If he doesn't learn to read well enough to comprehend what he is reading, if he doesn't learn to read effortlessly enough to render reading pleasurable, if he doesn't learn to read fluently enough to read broadly and reflectively across all the content areas, his chances for a fulfilling life, by whatever measure - academic success, financial success, the ability to find interesting work, personal autonomy, self-esteem - are practically nil (McPike, 1995, p. 3).

"The major determinant of educational achievement is the extent of a child's mastery of literacy" (Wells, 1986, p.193). Literacy is an important part of our daily lives at home, school, the workplace and in the community (Au., Mason, & Scheu, 1995). The curriculum framework should recognize the importance of both the affective and cognitive dimensions of literacy (Au et al., 1995). In education, many decisions, made at a number of levels, are made purely on the basis of performance on reading tests. Pupils, programs, teachers, and entire school districts are judged by gain scores on reading tests. Research studies support or reject hypotheses on the basis of reading tests scores (Johnston, 1983). Literacy is the cornerstone of education.

The Commonwealth of Virginia's Literacy Policy Initiatives

Given the importance of reading in life, the Commonwealth of Virginia is appropriately involved in assessing literacy instruction and setting literacy standards. Since 1981, Virginia public law embodied in the Standards of Quality (SOQ) has tasked school divisions to implement educational objectives equivalent to or exceeding the Board of Education's Standards of Learning (SOL). The LPT program is an outgrowth of the Commission on Excellence and Board of Education's deliberations. Currently, it operates under the aegis of the Standards of Quality and the Standards of Accreditation (SOA). In October of 1986, in a report entitled *Excellence in Education: A Plan for Virginia's Future*, the Governor's Commission on Excellence in Education estimated that 25% of Virginia students who attend the ninth grade do not graduate from high school (Estes & Estes, 1989). Members of the Commission recommended that the state establish literacy tests in reading, writing, and mathematics. The recommendations were incorporated in the Standards for Accrediting Public Schools in Virginia (SOA) in June 1987 and the Standards of Quality for Public Schools in Virginia (SOQ) in July 1988. In 1988, the Virginia General Assembly enacted Standards of Quality that require students to pass literacy tests before they can be classified as ninth-graders and earn a standard diploma. As set forth in Section 22.1-253.13:4 of the Code of Virginia, students are required to earn the literacy passport in order to (a) be promoted to ninth grade, except those students who are identified as handicapped (Standard 4.B) and (b) obtain a standard diploma (Standard 4.C). Regulations of the State Board of Education, embodied in the Standards for Accrediting Public Schools in Virginia (SOA), require school

divisions to create an alternative program for each student who has not earned the passport by the end of grade eight (Standard F., Criterion 1; Department of Education, Superintendent's Memo #1, July 24, 1992).

During the 1987-1989 school years, the Virginia State Board of Education, at the recommendation of the Governor's Commission on Excellence in Education, permitted the testing of sixth-grade students for the purposes of (a) identifying students who have mastered basic skills essential for continued success at the secondary level, and (b) identifying students at the middle school level who need remediation in basic skills in order to be successful at the secondary level (Estes & Estes, 1989). The test was given to sixth graders during 1987-88 and 1988-89 to aid in the development of the program. In 1990, the LPT was adopted (a) as a way of determining whether or not state standards had been established and met, (b) as a meaningful measure of how well schools prepare students for related high school work and to be functionally literate at a standard that the future global village will require, (c) to provide a true barrier to accomplish the overall purposes of establishing high standards, and holding schools and pupils accountable for meeting those standards, and (d) to serve as both the barrier to ninth grade entry and the barrier to a standard diploma. Since the LPT became mandatory in (1990), policy makers have been continually gathering information for the purpose of clarifying regulations and policies. The original purpose of an assessment instrument was to have a mechanism for the identification and remediation of middle school students whose lack of skills would prevent them from experiencing success in secondary school, thus preventing students from graduating illiterate. The commission hoped to break the cycle of illiteracy in

Virginia (Estes & Estes, 1989). However, mandatory passage of the LPT for ninth grade entrance and graduation makes the test a barrier test.

The Literacy Passport Test

The Literacy Passport Testing Program is an outgrowth of the Commission on Excellence and Board of Education deliberations about assessing students' achievement of state educational learning goals. The Division of Research and Testing, in search of a holistic assessment of reading that was in compliance with Virginia's Standards of Learning objectives, selected a version of the Degrees of Reading Power as the Literacy Passport Test. The Literacy Passport Test (LPT), developed by Touchstone Applied Science Associates (TASA), is a criterion-referenced test that gives information about the student's ability in relation to the difficulty of the test. The reading test contains eleven nonfiction passages ranging in length from 300 to 500 words, arranged in order of difficulty from very easy to very difficult. It includes 77 multiple-choice items (presented in a deletion format) that measure a student's ability to predict a missing word by using the information in the surrounding text.

According to the authors of the DRP, the aims of the tests are (a) to be a useful outcome measure that forecasts what students can read in the "real world," (b) to enable students and school systems to establish measurable "real world" goals or expectations and to determine whether such goals have been met, (c) to measure change in the students' ability to comprehend text over academically relevant periods of time, and (d) to provide useful information for matching the prose difficulty of instructional materials with student ability (Koslin, Zeno, & Koslin, 1987). The Commonwealth of Virginia is

attempting to use an effectiveness measure designed to index progress in reading ability realizing that the most important goal of reading instruction is reading comprehension.

Significance of the study

Acknowledging and changing an individual's conscious and unconscious explanations of events is a means of changing behavior and improving achievement (Antaki & Brewin, 1982). A barrier test is a significant event in the lives of middle school students. The inability of some student to surmount this milestone-like test of certain cognitive achievements can be somewhat devastating to some pupils who may begin to perceive themselves as abject failures, mainly because of this significant test outcome. Test failure can be traumatic and life altering for the student. Therefore, causal perceptions for successful or unsuccessful outcomes on the LPT warrant investigation.

The Commonwealth's Department of Education is seeking ways of assisting students who fail the test. Identification of salient causal ascriptions will provide relevant data to be incorporated in instructional strategies and curriculum design. The open-ended student responses will provide significant information about affective aspects of curriculum components that can be vital in creating and implementing instructional programs and assessment procedures.

Rationale and Purpose

"Sixth-grade test scores plummet" (Goldstein, 1995, A1, A2). "Sixth-grade passing rates on skills tests are unchanged . . . .Students' scores on Virginia's reading tests are a major cause for concern because of the importance of reading to academic achievement. A student's strength in early reading (strongly predicts) his or her long-term

achievement potential" (Bowers, 1996, A1, A10).

Poor test performance on the Literacy Passport Test (LPT) infers flaws with the educational system. Administrators statewide are seeking causal ascriptions for the performance of the students in their districts. Whether or not adequate progress in learning to read is being made in the classroom is a central issue in educational accountability (Koslin et al., 1987).

Educators continually search for the causes of students' success and failure in reading achievement. The purpose of this two-part study is to (a) investigate the causal attributions of sixth grade students who pass or fail reading on the Virginia LPT and (b) find a data collection instrument appropriate for this sample. A limited amount of attribution research is available on the causal perception of success and failure in reading especially in the middle grades.

Adaptation (Weiner, 1986, p. 3) and change are not possible without causal analysis. Understanding the causal attributions of students on any achievement related task(s) or test(s) become extremely significant when the outcome of success or failure determines if a student receives a high school diploma. It is theorized that the effects of causal dimensions on achievement and behavior are mediated by future expectations and emotional reactions to achievement outcomes (Weiner, 1986). The results of a study by A. Raviv, D. Bar-Tal, A. Raviv and Y. Bar-Tal (1980) indicate that the types of causes utilized to explain success or failure are important determinants of achievement-related behavior. Declining reading scores warrant research that addresses the causal ascriptions of sixth grade children who are required to pass a Literacy Passport Test.

This study is based on the belief that the student's success or failure (problems) on the LPT are consistent with the causal schemata suggested by attribution theorists.

The Problem

Educators are losing the literacy battle nationally and particularly in urban settings. A large percentage of students in urban schools nationwide fail reading tests. In an effort to create more permanent solutions for this chronic problem, it is essential that educators invoke the students' perceptions on how they define and explain their failure. The most obvious causes first appear to be the teachers, the curricula and the home environment. It is crucial that educational institutions provide the most appropriate educational curricula and opportunities for students to learn to read, but the solution doesn't rest solely with the instructional institutions.

While the tests are an effort to ensure that each student in Virginia is prepared for high school in the basic academic areas of reading, mathematics and writing, the tests are a "gateway" to success or an educational access barrier. The successful completion of the this test is necessary for a student to be classified as a high school student and to earn a regular diploma. While the intended goal is to raise academic standards in the Commonwealth of Virginia, not passing the mandatory LPT renders the test a barrier assessment. Virginia's implementation of the Literacy Passport Test in the middle grades is based on research suggesting that the most developmentally appropriate ages to implement barrier assessment is nine to eleven and then again between fourteen to sixteen years of age (Virginia Department of Education, Superintendent's Memo, July 24, 1992). The way the educators respond to the outcome of the students' tests performance depends

on the attributions made for the students' success or failure.

Students in Virginia's public schools have continued to fail the LPT in significant numbers. The answer to "why" depends on many factors such as instructional programs, student characteristics, and causal information known only by the attributors. A news reporter voices the sentiment of a growing number of educators and concerned citizens.

> The LPT results suggest a need for increased attention in this area (reading). . . . Average to disappointing. . . . Sixth-grade Literacy Passport Test passing rates continue to hover at less than seven out of 10. . . . In the spring of 1996, 69.5 percent of sixth-graders passed, on their first try, all three parts of the Literacy Passport Test. . . .The percentage of first-time success hasn't changed much since schools began using the test in 1990 (Bowers, 1996, p. 1).

These statements, reported in the December 2, 1996 edition of THE VIRGINIAN-PILOT, are included in a draft of the Annual Report on the Status of Public Education submitted by Michelle Easton, president of the state Board of Education. The Literacy Passport Test as a requirement for high school entrance and the continued failure of about 35% of the students is a problem. Consistent with attributional theory of causal knowledge, concerned agencies and citizens in the Commonwealth of Virginia are seeking solutions to the problem.

Research Questions

In the present study, the researcher addresses the problem by examining the issue from the perspective of the student. This researcher addresses three questions.

1. Is there a significant difference between the causal dimensions of middle school

students who passed reading on the LPT and those who failed reading?

2. Are these differences related demographically to variables such as gender and ethnicity?

3. Is there a significant difference between the causal dimensions of males and females as they apply to the Virginia Literacy Passport reading test?

4. Is there a significant difference between the causal dimensions of minorities and nonminorities as they apply to the Virginia Literacy Passport reading test?

Causal attributions are hypothetical constructs. Finding an acceptable methodology assessing or measuring attributions remains a topic for continued research. Conducting research of causal dimensions focuses on the unquestioned acceptance of a priori categorization schemes, without ascertaining the subjective perceptions of the respondents (Weiner, 1986, p. 112).

The cognitive characteristics (Schurr, Thomason, & Thompson, 1995) of pre-adolescents mandate appropriate data collection methodologies that accommodate their attention span and functioning level. Given the brief time span in which a researcher has to capture a response for this specific outcome, a precise, condensed assessment measure is necessary for data collection. It is also important that researchers avoid what Russell (1982) refers to as "the fundamental attribution researcher error" (researchers categorizing the dimensions).

Russell developed a psychometric instrument referred to as the Causal Dimension Scale (Russell, 1982; see Appendix A) in order to measure how individuals perceive causes. Subsequent research using the Causal Dimension Scale indicated a need to further

differentiate the control dimensions in terms of whether the cause is (a) controllable or uncontrollable by the person and (b) controllable or uncontrollable by other people (McAuley, Duncan, & Russell, 1992). This fourth dimension is referred to as personal control. Russell, subsequently, has revised the initial causal dimension instrument to include (a) locus of causality, (b) external control, (c) stability, and (d) personal control (McAuley et al., 1992).

To find an acceptable instrument to assess the causal dimensions of the students, the researcher conducted a two part study. In the first part of the study, the researcher conducted a pilot study to determine if Causal Dimension Scale II (CDSII) was appropriate to use with middle school students. In part two of the study, the researcher administered CDSII to middle school students and statistically analyzed the data. Therefore a pilot study was conducted to answer two questions.

1. To what extent is CDSII a reliable instrument for assessing the causal dimensions of sixth grade students on a required reading exam?
2. To what extent is CDSII a valid instrument for measuring the causal dimensions of sixth grade students on a required reading exam?

Delimitations and Limitations

A literature search revealed that CDSII had been used almost exclusively in studies with adults, most of whom were college students. CDSII is a semantic differential scale with terms that are, in some instances, considered synonymous. Consideration was given to the possibility that the connotative meaning of the terms may not be clear to the middle school population. To minimize confusion with the terminology, the terms were

defined for and discussed with the students (if requested) to reduce any definition confusion that may have occurred.

In order to familiarize the students with the format and terminology of the instrument, a sample scenario situation was provided for practice prior to completing the scale for their reading outcome.

Student names did not appear on the response sheets. The students were asked to self-report the pass or fail results. The assumption was that the students would report the results honestly.

Sixth grade teachers who volunteered and the researcher administered the semantic differential scale to the students. The assumption was that the teachers would follow the directions as written. Prior to the administration of the survey to the students, the researcher modeled administration of Causal Dimension Scale II for the teachers using a sample hypothetical scenario.

Reading comprehension is difficult to assess. The LPT, as an appropriate assessment instrument, is not the focus of this study. Rather, the focus of this study is the students' feelings about their performance on the LPT.

Another limitation, as noted by Weiner (1986), was that the logical analysis of causal structure was derived from attribution theorists, rather than from the subjects. This study limited the dimensions to locus, stability, personal control and external control. As discussed earlier, the perception of causality is an ascription imposed by the perceiver. It is conceivable that the dimensions designated in CDSII are not identical between theorists and are not the same as those of the subjects (p. 51).

Middle school children represent a unique population. Some adolescents may not be able to understand or articulate their own feelings regarding the causes for their performance. The students were asked to report only what they perceived to be the most important cause. Asking students for only one response and the most important response possibly limited the information gained.

Inasmuch as reaching a causal attribution can be considered a complex decision problem, it should be anticipated that humans can be imperfect attributors (Weiner, 1986). Therefore, logical analysis at best is supposition, for this is a unique population and a unique situation for middle school students. This increases the likelihood that the results found in this research study may be specific to this group. Because of the difficulty in assessing reading comprehension and the problems some students have with testing, the actual test outcome may not reflect the students' actual ability.

Definitions of Terms

The terms that are defined in this study are *cause (causal perception, causal ascription, causal attribution), barrier assessment, causal dimensions (locus of causality, external control, stability, personal control), and criterion-referenced tests.*

The term *cause* (used interchangeably with causal perception, causal ascription and causal attribution) is the answer to a "why" question regarding an outcome. Causes are constructions imposed by the perceiver to account for the relationship between an action and an outcome (Weiner, 1986, p. 22). A distinction is made for the term causal ascription. Causal ascription is used to refer to why an outcome occurred rather than why an action took place.

The *causal dimensions* discussed in this study are *locus of causality, stability, personal control* and *external control.*

Locus of causality concerns whether the causes resides within or is external to the attributor. An action occurs as a result of factors within the person and factors within the environment (Heider, 1958).

Stability refers to whether the cause is invariant or changeable over time. Stability of a cause is associated closely with expectancy. If conditions remain the same, the outcome is expected to recur.

Control reflects whether the cause is controllable or uncontrollable. The dimension of personal control differentiates on the basis of whether the cause is (a) controllable or uncontrollable by the person and (b) controllable or uncontrollable by other people (McAuley et al., 1992). Personal control is the belief that one can overcome barriers effectively and act upon the environment. It is extremely important belief that deters maladaptive stress reactions and undesirable psychological states and consequences.

Criterion-referenced tests refers to tests that determine whether students have passed a criterion or some arbitrary percent of items on a test of particular skills or objectives. Criterion-referenced tests do not directly measure educational outcomes. Rather, they are discrete-point tests providing limited information on how well students perform on very specific items and objectives (Koslin et al., 1987, p.1).

CHAPTER II

LITERATURE REVIEW

Introduction

Attribution theory and analysis has long been the basis for explaining, understanding and predicting human behavior in various situations such as attitude change and persuasion (Wood & Eagly, 1981); helping behaviors (Ickes & Kidd, 1976; Meyer & Mulherin, 1980; Weiner, 1980); interpersonal relations and behavior (Fincham, 1985; Hill, Weary, Hildebrand-Saints, & Elbin, 1985; Regan, 1978; Wachtler & Counselman, 1981); equity behavior (Greenberg, 1980); health, emotional and psychological issues (Weary, Stanley, & Harvey, 1989). Causal beliefs have been documented and used to explain a wide array of human and nonhuman behaviors, ranging from interpersonal relations to conditioning and instrumental learning. It appears that current literature is concerned with attributional change in clinical treatment, guided by the fundamental belief that changes in behavior are mediated by changes in causal perceptions (Forsterling, 1988).

Numerous causal attributions and causal dimensions have been identified (Passer, Kelley, & Michela, 1978); however, there is no single theory of attribution. There are several theoretical approaches that interpret causal attribution processes, each share some similarities, yet retain their own unique qualities (Weary et al., 1989). In addition to attributional conceptions that focus primarily on the process of making attributions, there are also a number of analyses that specifically address the consequences of arriving at a given attribution and attributional style. Attribution-based theories of emotion,

achievement, motivation, affiliation, helping behaviors, revenge, and equity attempt to analyze outcome and consequence ascriptions (Kelley, 1978, Weary et al., 1989).

According to Antaki and Brevin (1982), in the area of achievement, attribution theory has at its center three complementary, but not formally linked principles, formulated by Heider, Jones, Davis, Nisbett, Bem, and Weiner. Jones and Davis' main assumption is that people use information about a person's choices and their consequences to arrive at a decision about his or her personal dispositions. Jones and Nisbett's principle maintains that differences between an actor and observers explanations may be due to informational differences or to differences to what actor and observer are attending. Kelley's principle postulates that an attribution is generated by a search for the causal candidate which is most closely associated historically with the event being explained. Bem suggests that these principles, first applied in actor/observer situations, may also be applied in self attribution analysis (Antaki, 1982). Weiner's attribution model of achievement-related behavior has been specifically applied to education.

The purpose of this chapter is to review and summarize relevant literature so that an appropriate background and theoretical framework for this study may be established. The literature review focuses on basic attribution and attribution theories as they relate to achievement, attribution measurement, causal dimensions and children in achievement related situations. Attributions following academic performance can have a meaningful impact on expectancies for future performance, affective reactions, and subsequent achievement-related behavior. These relationships are moderated by the dimensional

aspects of attributions. Individual differences in achievement motivation and attribution style also have an impact on academic success and/or failure. Students' attributional styles regarding academic success and failure have been hypothesized to be moderators of persistence in academic tasks. Maehr and Braskamp (as cited in Cooley, Beaird, & Ayres, 1994) note that persistence is seen globally as a behavioral correlate of motivation. Knowledge of underlying cognitive and schematic patterns is important in designing intervention strategies to improve persistence in learning; changing attribution styles is believed to positively influence academic behavior (Forsterling, 1985). This chapter provides background information and research studies supporting the necessity of continuing research on attribution theory and achievement.

Theoretical Framework

Heider's Common Sense Psychology of Person Perception

Historically, attribution theory has been associated with social psychology and Fritz Heider's (1958) seminal analyses of how people perceive and explain the actions of others (Weary et al., 1989; Olson & Ross, 1985). Heider theorized that individuals are not contented with simply observing events. Rather, they strive to understand the causes of these events. Heider referred to his theory as "common sense or naive psychology," a concept that explained another person's behavior (Weary et al., 1989, p. 6). This early attribution analysis focused primarily on people making causal inferences and forming impressions of others across a variety of social settings. Heider conceptualized systematically person perception or how people perceive and interpret the action of others (Weary et al., 1989).

The fundamental premise of person perception is that people search for the causal structure of events via reliance upon attributions to the environment or to something in the person involved in the event. Person perception focuses on what people think about one another from the perspective of (a) what they would judge another person to be like, (b) how quickly they would form their judgments, (c) what they would base their judgments on, and (d) how much they would be influenced by their own needs and desires (Antaki, 1982). Person perception consisted of three steps (a) distal stimulus, (b) proximal stimulus, and (c) constructive process.

Heider's causal analysis of person perception (Weary et al., 1989) suggests that information about a distal stimulus (the other person) is obtained through some form of mediation involving physical stimuli. The stimulus pattern that the perceiver receives is termed the proximal stimulus. Through mediation, the perceiver and the objects of perception may be said to be causally connected. The constructive process within the perceiver results in the phenomenal perception of the person as experienced by the perceiving organism. In the constructive part of the process, the proximal stimulus may be actively interpreted (by the perceiver) against a background of subjective forces such as past experiences, wishes, needs, and future expectancies. Perceptions arise that best fit the stimulus conditions and internal systems of evaluations (Weary et al, 1989, p.7).

Heider (1958) suggests that there is an interaction between the central processes, and this interaction determines, more or less, how the proximal stimulus is organized and how the final perception is phenomenally experienced. In some cases, causal information may be inherent in the perceptual organization of information as determined by the

properties of the perceptual apparatus. In other cases, causal information may evolve from more deliberative, inferential processes within the perceiver.

Phenomenal and causal descriptions. According to Heider's analysis of social perception and phenomenal causality, attribution processes are inextricably intertwined with perceptual processes and are oriented toward the search for structure or dispositional properties. Heider identifies these processes as phenomenal and causal descriptions. In phenomenal description, the person or object in an observer's field is directly experienced; in causal description, the observer experiences a person or object as the result of a constructive process often represented by a series of cognitive operations. Heider referred to these modes of social knowing with the terms perception and inference (Kassin & Baron, 1985).

In contrast to inferences about causality, judgments of responsibility require the consideration of a number of different dimensions of which causality is only one. Attributions of personal responsibility increase with increases in the person's (a) observed or apparent causal contribution to the outcome, (b) knowledge of the consequences of the action taken, (c) intention to produce the outcome, (d) degree of volition versus coercion, and (e) appreciation of the moral wrongfulness of the action (Shaver, 1985).

Environmental and personal force. Heider (1958) suggests that people search for the causal structure of events via reliance upon attributions to the environment (external attribution) or to something in the person involved in the event (internal attribution). External attributions are those made to the physical and social circumstances surrounding the action while internal attributions are made to the actor's ability, motivation, attitude,

or emotional state. Heider further proposed that an action outcome depends upon a combination of environmental force and personal force. Environmental force refers to important external factors such as the difficulty of a task. Personal force involve ability, motivation, and intention. The two necessary and sufficient conditions for the production of an outcome are "can" and "trying." The specific components of "can" are, on the one hand, ability and power and, on the other hand, environmental factors. Whether or not the effect will be produced then depends on the "trying" component of personal force. "Trying," as described by Heider (as cited in Weary, 1989 et al., 1989, p.8) has both a directional component (what the person intends to do) and a quantitative component (how hard the person is trying to do something). Intention is often taken as the equivalent of wishing, or wanting. Exertion varies directly with the difficulty of the task and inversely with the power or ability of the person. The less power or ability individuals have, the more sedulously they will have to exert themselves in order to succeed. The greatest exertion will be needed when individuals have little power or ability and the task is difficult. Greater power or ability is attributed to people if they are able to solve difficult tasks with little exertion.

Attributed responsibility. A developmental aspect of Heider's theory of attributed responsibility, discussed in Weary, Stanley and Harvey (1989), suggest that observers judgments of an actor's responsibility for an event should show an age-related developmental progression. This age-related developmental progression has five specific levels of responsibility, each based on different combinations of personal and environmental forces such as (a) association, (b) causality, (c) foreseeability, (d)

intention, and (e) justification. This progression suggests that causal attributions probably follow a developmental scheme similar to that of responsibility attributions, however, they appear to be simpler to learn since age differences in causality judgments are less apparent than age differences in the attribution of responsibility.

Attribution analysis and control motivation. Closely associated with attribution analysis is a control motivation hypothesis. Understanding of the social world makes events predictable and controllable (Weary et al, 1989). In a direct test of the control motivation hypothesis, Pittman and Pittman (1980) found evidence that attribution activity increases following an experience with lack of control. Aspects of the stimulus information that would be expected to arouse control motivation, such as unexpected information and negative outcomes, stimulate attribution analyses. If a perceiver's involvement with or outcome dependency upon a target is great, it is important for the perceiver to engage in causal analyses. Outcome dependency is great when a negative outcome represents a barrier to high school. Heider (as cited in Weiner, 1992, p. 284)) proposed that perceivers are inclined to attribute actions to stable or enduring causes (e.g., personality traits) rather than transitory or variable causes (e.g., mood). Further, factors within the person and factors within the environment stand in an inverse relationship to each other: the more the person is seen as causing the action, the less influence the environment will be perceived to exert. The more the environment is perceived as a catalyst for the action, the less exertion is credited to the person.

Jones, Davis, and Nisbett

Heider's principles of ordinary explanation were formalized in a theory of correspondent inference (Antaki, 1982, p. 7) initiated by Jones and Davis. The theory of correspondent inference delineated attribution theory into dispositional explanations. Correspondent inference discounted the operation of situational or external constraints on the person's behavior. The dispositional explanation of behavior attributed action to long-lasting traits that the person possessed (internal causes), attributing the actor with internal dispositions for the behavior.

Jones and Nisbett (1972) proposed two major differences in observer attributions and actor's attributions. The observer's attributions were dispositional while the actors attributions were situational, due to the demands or opportunities of the situation. Jones and Nisbett noted two classes of reasons for the difference: (a) There were informational and perceptual differences between the actors and observers, and (b) there were ego-involving motivational reasons. With the informational differences, the actors knew more about their own history, attitudes, intentions and motivations than the observers. However, Jones and Nisbett concluded that the perceptual differences were the most significant. In addition to the actor having more available information than the observer and possibly wanting to attribute blame to the environment, the perceptual position notes the simple perceptual differences in the scene confronting actors and observers. For the observer, behavior is figural against the ground of the situation; for the actor, it is the situational cues which are figured and seem to elicit behavior.

Kelley's Principle of Logical Analysis

Harold Kelley (Antaki & Brewin, 1982) augmented Heider's analysis of internal and external person perception with a principle of logical analysis in the way the perceiver collected information about the actor. Kelley (1967) suggested that it is the perceiver who decides whether the cause of action was something about the actor's environment or an interaction between two sets of causes. The perceiver examines the history of the behavior from the prospective of (a) consistency information (how often the behavior occurs in similar situations), (b) distinctiveness information (how often the behavior occurs in different situations), and (c) consensus information (how many other people do the same sort of thing. Kelley s model allowed the specification of the ways in which people pick up and put together the social information that is involved in making explanations (Kelley, 1967).

Bem and Self-Perception

Finally, Daryl Bem (as cited in Weary et al., 1989) was the first theorist to focus the attribution processes exclusively on self-perception. The theory of self-perception posited by Bem suggested that Kelley, Jones and Davis' models of person perception be used to describe judgments of the actor as well as the observer. Whatever method of information processing that was used to understand another's action in person perception could be employed to understand one's own behavior and psychological states.

Heider's work was further enhanced in the 1960s by Kelley (in Olson & Ross, 1985) who incorporated Bem's analysis of self-persuasion into the attribution framework.

From Bem's work, Kelley developed a general theory of attribution in which the rules governing self-perception were essentially identical to those governing social perception.

Research on self perception was the basis for early research on attribution analysis and achievement. Weary et al. (1989) basically state that the cause of an event is the antecedent or set of antecedents sufficient for the occurrence of an effect. In person perception, the researchers are concerned with how one person perceives the actions of another person. In self perception, the researcher focuses on how an individual perceives his own behavioral actions. Social psychologist, Corrigan (1995), views causal understanding as a critical, central component of children's and adults naive theories about their physical and social worlds and the concepts embedded within the theories. Corrigan posits that by the time they are in preschool, children assume that all social behaviors are caused and that most behaviors have psychological causes. Causal reasoning is thus seen as a primary building block for subsequent developments (p.2). According to White (as cited in Corrigan, 1995), people judge cause and effect on the basis of regularity information such as probabilistic information, abnormal conditions, or covariation; and according to generative theories, causation involves observation of actual events in which an effect is generated (p. 3). When considering causal relations as generative, causes must literally do something to bring about their effects either directly or through some intermediary chain of events (Bullock, 1985, p. 172).

Heider's analysis of action was the germinal work for later theoretic developments; all subsequent attribution analyses contained elements of Heider's formulation. Heider's main contribution was to consider the ordinary person as a

psychologist assessing the attributions of others and separating ordinary causal explanations into two categories, personal and environmental causes. While Heider's "common-sense psychology" or the" naive analysis of action" focused on the behavior of others, Heider's (1958) theoretical statement provided the seed for the development of other attribution areas in social psychology. Whether or not the analysis is of self or others, people make attributions to render their experiences understandable, controllable, and predictable. These attributions are made out of the need to understand, organize, and form meaningful perspectives about the myriad events people observe and experience.

Weiner's Attribution Theory

Weiner's attribution theory (as cited in Antaki & Brewin, 1982) takes us to the point of providing a description of the process of identifying an attribution. Attribution theory delineates the link between the attribution one makes for an event, one's reaction to the event, and one's behavior directed towards an event (p. 13). Psychologists are not just concerned about the mental processes of formulating the attribution; they are also concerned with how the products of these processes are used to guide people's conduct. Attribution theories of motivation are based on the interrelated cognitions of causal ascriptions, efficacy and control beliefs, helplessness and thoughts about the goals for which one is striving. The "person as a scientist" and the "person as a judge" metaphors, respectively, correspond to the distinction proposed by Kelley and Michela (1980) between attribution theory (information to cognition) and attributional theory (information to cognition to action). Attributional theory of motivation is most closely aligned with the concept of the person-as-scientist (Weiner, 1991).

Weiner's model incorporated the antecedents of attributions, the dimensions or properties of causes as well as specific causes, per se, and both affective and cognitive consequences of particular self-ascriptions. To Heider's internal-external cause division Weiner added the dimensions of stability and control (Antaki & Brewin, 1982). In agreement with Heider's theory, causal search is functional because it imposes order on an unpredictable environment (Graham, 1991).

In achievement contexts, success and failure typically are ascribed to some ability factor that includes both aptitude and acquired skills, an exertion factor such as temporary or sustained effort, the difficulty (ease) of a task, personality, mood, and help or hindrance from others. As Weiner (1991) asseverated, attribution theorists assume that (a) knowledge, understanding, or "the attainment of cognitive mastery of the causal structure of the environment" is the primary source of motivation, supplementing or supplanting the pleasure principle, (b) causal knowledge addresses both actions and outcomes associated with the self (such as personal success or failure) as well as to inferences about others, (c) the motivational assumption in attribution theory is that causal knowledge is functional, thus guiding subsequent action. Success and failure ascribed to disparate factors such as ability versus effort versus other variables produce quite different effects on achievement strivings (Weiner, 1986; 1991). Weiner's attribution theory of motivation has a wide range of applications. Simply stated, a person's motivation to do something is a function of how well he has done the same thing in the past and to what he attributes his success (or lack of it).

Achievement Attributions and Dimensions

Weiner and his colleagues (as cited in Weary et al., 1989) were leaders in establishing the centrality of the four primary achievement ascriptions, (a) ability, (b) effort, (c) luck, and (d) task difficulty. In early achievement studies, students imagined or experienced academic success or failure and subsequently evaluated the cause of the outcome in terms of ability, effort, luck, and task difficulty.

In other measurement formats, the subjects were given the chance to respond freely and raters coded the attributions. In addition to attributions of ability, effort, luck, and task difficulty, ascriptions such as mood, value of the outcome, and the behavior of others was evidenced in other studies. In dimensional space, the attributions clustered in two primary dimensions: locus of control and stability. Internal causes included ability and effort ("can" and "trying"), whereas external causes included variables such as luck and task difficulty. Ability is seen as more enduring whereas effort fluctuates more easily over time and across situations. Luck is considered an external, changeable cause whereas task difficulty is perceived as a less variable aspect of the environment.

Further studies indicated that attributions to internal causes are more likely to occur following successful academic outcomes, whereas external causes are more likely to be called upon to explain academic failures. In a study by Bernstein (as cited by Weary et al., 1989), college subjects who did well on a course exam (or who imagined themselves or others doing well) were more likely to endorse attributions such as ability and effort than students who perceived their own or others behavior as a failure. On the

other hand, students who failed (or imagined themselves or others failing) emphasized bad luck or the difficulty of the test as being important causes for the outcome.

In addition to locus of control, stability of causes was determined to be an important aspect of attributions following academic success and failure. Arkin and Maruyama (as cited in Weary et al., 1989) reported that following actual performance on a college exam, students were more likely to attribute perceived success (relative to perceived failure) to both internal and stable causes. Second, stability was an important variable in a study conducted by Frieze (as cited in Weary et al., 1989). In the study, college subjects were given the opportunity to provide their own explanations of imagined academic outcomes in a free-response format. Analysis of free responses demonstrated that success was attributed more often than failure to ability (internal, stable cause), whereas failure was attributed more often to being in a bad mood (internal/unstable cause). Stability appeared to be a more important attribution dimension than locus of control in differentiating causes for success and failure.

Causal dimensions, common properties underlying attributions, were considered to be of greater significance than the attributions themselves. The thrust of the theory posits that the effects of causal dimensions guides future behavior (Weiner, 1985; McAuley, 1992). In addition to identifying the dimensions of locus, stability, and control, Weiner (1979, 1985, 1986) postulates that the consequential effects of these dimensions are significant and achievement-related. Weiner proposed that the dimensions influence cognitive, affective, and behavioral reactions. The dimension of stability is central to assessing their impact on expectancies for future outcomes (Weary et al., 1989). Locus of

causality is considered to influence affective reactions, while controllability influences behavioral reactions.

Weiner's theory (1985, 1986; Weary et al., 1989) focused on relationships between affect and the general dimensions of attributions (locus, stability, and controllability). This theoretical position offers a description of sequential processes linking attribution thinking to emotional experience. Following an achievement outcome, a general positive or negative emotional reaction occurs based upon the perception that one has succeeded or failed. Perception of success or failure also initiates a search for causes of the performance outcome. Once appropriate causes have been identified, the causes are located in dimensional space, being characterized as internal/external, stable/unstable, and controllable/uncontrollable. The dimensional properties of attributions then have psychological consequences that influence expectancies for future performance and create dimension-related affective states (as well as dimension-related expectancies and behavior). The dimension of stability is central to assessing the impact on expectancies of future outcomes. If causes of past outcomes are perceived as remaining stable over time, expectations of future outcomes should be consistent with past outcomes. If causes are perceived as being unstable, individuals will not necessarily expect similar outcomes to recur. Weiner (Weary et al., 1989), challenged Rotter's theory of internal/external control, contending that ability can be categorized as internal and stable and luck can be characterized both as external and unstable. Stability, rather than locus has the major causal influence on expectancies.

A study by Weiner (1972; Weary et al., 1989) exposed high school subjects to repeated failure experiences with a digit-symbol substitution task. The subjects were asked to attribute their performances to ability, effort, luck, or task difficulty, and to provide subjective ratings of the probability that they would succeed on future digit-symbol task trials. Correlational analyses demonstrated that expectancies for future success were higher if subjects attributed their past failure to effort and luck (unstable causes) rather than to ability or task difficulty (stable causes).

College students, in a study by Bailey, Helm, and Gladstone (1975), attributed their performance on a midterm exam to one of the four basic causes and rated their confidence in obtaining a higher, lower, or similar grade on subsequent exams. Correlational analyses indicated a tendency for expectancies of future performance to be higher following failure if the failure was attributed to insufficient effort (unstable) rather than deficient ability (stable). In Bailey's study, stability was not significantly related to expectancies for success following past successful outcomes.

Weiner, Nierenberg, and Goldstein (1976; Weary et al., 1989) conducted a study in which college students were given from zero to five success experiences with a modified-block-design task. These students were asked to make attributions for their performance and rate the number of subsequent trials they expected to solve correctly. Attribution measured in this study were designed to assess the impact of the attribution dimensions of stable/unstable and internal/external. A separate set of ratings were made within each of these levels, such that one level remained constant while the other varied. Correlations indicated that expectancy for future success was highest when attributions

were made to stable rather than unstable causes. This relationship occurred regardless of the level of the locus dimension specified (internal or external) and regardless of the number of success trials experienced by subjects. Overall, expectancy of success was not related significantly to the locus dimension.

Kovenglioglu and Greenhaus (1978; Weary et al., 1989) assessed the responses of college students who had just received a grade on a chemistry test. Subjects who had perceived their past performance as successful stated expectancies significantly related to their attributions of the previous grade to ability (internal, stable attribution). When subjects perceived their past grade as a failure, expectancies for future exam performance were significantly related to attributions of past grade to effort (internal, unstable attribution). This study supported the central theory that stability is the central characteristic of attributions that moderate their impact on expectancies for future performance.

Several studies support Weiner's (1979) proposal of a third dimension of controllability in the analysis of attributions and achievement behavior. Variability in the nature of a cause could occur based on the extent to which the cause was perceived as being within an individual's control. For example, mood and effort both can be classified as internal and unstable, but mood typically is perceived as being outside an individual's control whereas effort is seen as being personally controllable. Forsyth and McMillan (1981a; Weary et al., 1989, p. 171) assessed college students following receipt of exam feedback. Subjects attributed their performance to internal or external, stable or unstable, and controllable or uncontrollable causes. Results indicated that stability of attributions

had no significant relationship to expectancies. Rather locus and controllability of attributions associated with expectancies such that failure attributed to external, uncontrollable causes significantly correlated with low expectancies for future performance, while success attributed to internal controllable causes was related significantly to high expectancies for subsequent test grades. In other words, expectancy for future success was high if subjects believed that performance was due to a factor over which they themselves had some control. If performance was determined by factors outside of the subject's control, expectancies for success were low.

Numerous studies support Wiener's principle regarding the link between attributions of success and affective reactions. Following receipt of information that one has performed well or poorly on some academic task, a student may experience one or many of a variety of affective reactions such as pride or shame, happiness or sadness, and high or low self-esteem. Weiner (1974; Weary et al., 1989), specified several roles that attributions play in academic performance and affective reactions. Internal attributions (Weiner, 1986; Atkinson, 1964; Weary et al., 1989), relative to external attributions should enhance pride or shame following academic success or failure. Specifically if academic success were attributed to high ability or to hard work (internal attributions), a student should feel prouder of his/her accomplishments and should receive more external praise than if successful outcome were attributed to external causes such as ease of the task or good luck. Failure attributed to internal causes (e.g., low ability, insufficient effort expended) should lead to greater feelings of shame than failure attributed to external causes (e.g., difficulty of the test or bad luck). This fits with the self-serving bias

interpretations of attribution patterns. The centrality of internal attributions for moderating the affect-academic-performance relationship is relatively well accepted by other researchers.

Weiner maintained that within the domain of internal attributions, attributions to effort should have a stronger relationship with affective reactions than ability attributions. Effort or ability as the greatest influence has not been as thoroughly researched (Weary et al., 198). However, effort was more influential in a study of college and high school subjects (Weiner & Kukla, 1970; Weary et al., 1989) who played the role of teachers and were asked to provide feedback for pupils whose performance on an exam was characterized by the experimenters in terms of ability and effort. Results indicated that rewards and punishment allocated by the teacher subjects for the pupils performance were related more closely to what the subjects had been told about the levels of pupil's effort rather than information about their ability. Effort was of greater importance than ability in determining affective reactions in achievement situations. Weiner (Weiner & Brown, 1984) subsequently extends these findings suggesting that effort also should be more important in determining evaluation of an affective reaction to one's own experience with success or failure. College students were asked to imagine passing or failing in a required course. Subjects reported greater pride when success was attributed to high effort rather than high ability and greater shame when failure was attributed to low effort rather than low ability.

Attribution and Affect Linkages

Weiner modified his original theory to a more complete theory of attribution/affect linkages (Weary, 1989). A study by Weiner and colleagues (Weiner, Russell, & Lerman, 1978, 1979) demonstrated that a number of affective reactions were evoked following academic success or failure regardless of the nature of the attributions made. These reactions--happiness, satisfaction, confidence, depression, disappointment, disgust, and upset were designated as outcome-dependent affects since they were influenced only by overall outcome (success or failure). These general reactions were the most intensely experienced emotions related to achievement behavior (Weiner, 1980), but other affective reactions were found to occur as a result of attributions to specific causes. In particular, ability attributions were associated with feelings of competence, pride, and resignation, while effort attributions were associated with feelings of relief, activation, and guilt. When performance was attributed to others, feelings such as gratitude or aggression were elicited, and outcome attributed to luck elicited feelings of surprise.

Numerous reports (Weary et al., 1989) support Weiner's notion that achievement outcome, regardless of attributions made, correlated significantly with general affective reactions following academic performance. A study by Nurmi (1991) indicated that in achievement situations, subjects felt more pride and happiness when they attributed success to effort and ability than when they attributed success to the influence of others. Subjects felt the most guilt and shame when they attributed their failure to lack of effort. The subjects felt the most anger after attributing achievement failure to others influence.

Data suggest that any affective states which can be linked to specific attributions may be only temporary and are certainly less stable than outcome-dependent affects.

Attributions have been linked not only to expectancies regarding future performance and affective reactions following academic tasks, but also to actual performance on subsequent academic tasks. Specifically, attributions about past academic performance can influence (a) the types of problem-solving strategies chosen for future tasks, (b) the amount of persistence exhibited on difficult problems, and (c) the accuracy of solutions to various types of problems. Bernstein et al. (1979; Weary et al. 1989) assessed college subjects before and after three major exams in a semester-long psychology course. Subjects who attributed their performance on the first test to stable causes such as ability and ease of the test were more likely than other students to get a lower grade on the subsequent test. Indications are that when stable causes were perceived as responsible for past test performance, students studied less or in a less efficient manner given that they believed such effort would have little impact on their subsequent grade. Given that attributions to stable causes can lead to high expectancies of success, students may have felt no need to study. In addition, subjects who believe their third test grade would be related to the amount of effort they expended prior to taking it tended to get higher grades on the third test. When attributions to effort, therefore, became a more prominent explanation for expected test performance, grades improved.

Data from a study by Weiner et al. (1972; Weary et al, 1989) also suggest that attribution of past failure to stable causes such as deficient ability or difficulty of the task led to deterioration in subsequent performance. Another study, however, has provided

contradictory data. Kovenglioglu and Greenhaus (1978) reported a significant relationship between ability attributions for current academic success and future exam performance. Students who believed they had done well on a test due to their own skill tended to get better grades on a subsequent exam. For these subjects, effort attributions for success were negatively related to subsequent test performance. The conclusion is that individual differences needed for achievement or attribution style account for discrepancies in the literature.

Measuring Causal Dimensions

The cornerstone of attribution theory is causal dimensionality. To understand why some attributions are more facilitative or debilitative than others, researchers typically interpret attribution response in terms of one or more bipolar dimensions (Vispoel & Austin, 1995). Based on Weiner's theory, the most prevalent dimensions are locus of causality, stability, and control. In attribution research, it is important that the theorized causal dimensions in the attribution linkage are accurately measured (McAuley, Duncan, & Russell, 1992).

Vispoel and Austin (1995) discuss three methodological approaches (situational, dispositional, and critical incident) commonly used in attribution research. In situational studies, participants read a detailed scenario about a hypothetical individual or the participants themselves engage in controlled laboratory tasks and successes where success/failure outcomes are manipulated to determine their effects on attribution response. The results are analyzed and interpreted usually by comparing mean differences. In dispositional studies, the researcher gives the subjects several brief

ambiguous statements representing a series of particular events within an achievement domain. The participants rate the events on the relative importance of various attributions. The results are pooled across events to create subscale scores that can then be analyzed using correlational analyses. A major limitation of both situational and dispositional studies is that they fail to assess individual responses to real-life experiences. Critical incident methodology overcomes the major limitation by asking participants to evaluate naturally occurring instances of success and failure or recall personally meaningful successes or failures and evaluate the causal attributions for the outcome.

In categorizing causal dimensions for analysis based on Weiner's theory, the methodology often requires the researchers or raters to translate the causal attributions made into the causal dimensions of locus, stability, and control. Russell (1982, 1992) refers to this as committing "the fundamental attribution researcher error." In a more appropriate methodology, the respondent would directly indicate how he or she views the attribution in terms of the causal dimensions (McAuley et al., 1992). In an effort to minimize this researcher error, Russell developed the Causal Dimension scale (hereafter referred to as CDSI), requiring respondents to give an attribution and code the attribution along a series of semantic differential scales representing the dimensions of locus of causality, stability, and control. subsequent use of CDSI has provided varying degrees of support for the reliability and validity of CDSI. A study by Russell and et al. (1987) provides multitrait-multimethod evidence to support the CDSI as being superior to other commonly used methods of assessing causal dimensions.

However, several studies using CDSI indicated problems with the wording and validity of the control scale. Researchers (Russell et al., 1987; Vallerand & Richer, 1988) raised the following concerns about the structure of the scale (a) low internal consistency of the control dimension and its propensity to correlate highly with the locus of causality dimension, (b) confounding or high inter-relatedness of attribution dimensions (Anderson, 1983; Anderson & Arnoult, 1985), (c) adequacy of the CDSI factor structure on the grounds that it has not been subjected to confirmatory factor analysis, thereby questioning the scale's construct validity (Vallerand & Richer, 1988), and (d) wording of the scale items delineating a cause that is "controllable by you or other people" at one pole and "uncontrollable by you or other people" at the other pole produced a dimensional placement that runs counter to the respondent's perception.

As concerned about the psychometric problems with the control dimension on CDSI, Russell revised CDSI by adding three items designed to differentiate between personal control and external control. Personal control is controllable by the participant, while external control is controllable by other people. The revised instrument is referred to as Causal Dimension Scale II (hereafter referred to as CDSII; see Appendix A).

In most achievement situations personal control is likely to be perceived as most salient while external control may seem more salient in outcomes such as health or interpersonal strife. People's beliefs about their abilities to exercise personal control of important events in their lives are thought to play a major role in achievement (Shell, Colvin, & Bruning, 1995). In measuring the dimension of controllability using CDSII, control is differentiated in terms of whether the cause is (a) controllable or uncontrollable

by the person and (b) controllable or uncontrollable by the other people. Personal control and external control are evaluated as separate but related dimensions underlying attributions (McAuley et al, 1992). Verbal anchors of the revised control scale reflect personal control, which is "something you can/cannot regulate" and external control, "something other people can/cannot regulate."

A study by Anderson and Arnoult (1985) provide support for the argument that personal control is the most important causal dimension. Four studies in diverse situations, laboratory and real-world settings support the use of Causal Dimension Scale II (CDSII) in assessing four causal dimension factors (a) locus, (b) stability, (c) personal control, and (d) external control. Because it is important to accurately measure properties theorized to underlie causal attributions, research validating CDSII as an affective assessment for younger populations is relevant.

A more suitable approach to assessing causal dimensions in future critical incident and dispositional studies may be to measure each causal dimension directly by asking respondents to indicate the extent to which a given success or failure experience is attributable to internal versus external, stable versus unstable, and controllable versus uncontrollable factors (Vispoel & Austin, 1995). It would be informative in such studies to measure causal dimensions and attributions separately to determine their degree of overlap as well as their relative effectiveness in accounting for achievement behavior or other outcomes.

Vispoel and Austin (1995), in a study of junior high school students, focused on students beliefs about why they succeed or failed in four subject areas in natural settings.

This is significant research in that most studies have focused on the reactions of college students to hypothetical scenarios or contrived laboratory tasks. Vispoel and Austin used critical incident methodology with junior high students. Students recalled naturally occurring successes and failures in four subject areas and rated the relevance of eight causal attributions to explain each outcome. This study explored the effects of situational context (subject area, activity) on attribution beliefs, the relations between attribution beliefs and reported grades and the dimensionality of attribution beliefs. Results highlighted the context-specific nature of causal beliefs and their strong linkages to reported classroom achievement. Factor analysis of attribution ratings did not yield dimensions of locus, stability, or controllability but instead showed a systematic trend for external attributions to generalize across subject areas and for internal attributions to remain subject-area specific. According to attribution theory, individuals seek to understand why certain events occur, especially when outcomes are disappointing or unanticipated. These beliefs in turn have important effects on motivation and achievement striving (Weiner, 1986).

Russell's analysis (1982) of attribution research concludes that researchers cannot accurately translate an individual's causal attributions into causal dimensions. Therefore, assessing causal dimensions presents a problem often because assessment methodology frequently requires the researcher to rate or translate the attributor's responses. Russell refers to this as the "fundamental attribution researcher error." In the traditional attribution paradigm, an essential step involves the translation by the researcher of causal attributions into causal dimensions. The placement of a causal attribution in terms of

causal dimension may vary greatly from person to person, as well as from situation to situation (Weiner, 1979, 1986). Problems encountered in the traditional paradigm include (a) researcher and attributor may not agree on the meaning of a causal attribution due to ambiguous attribution statements, (b) the attributor may perceive the cause quite differently than the researcher; (c) situational variability in attributions may occur. Causal Dimension Scales I and II make it possible for the attributor to openly respond and rate her/his own response directly. It is felt that the attributor is best able to assess his or her own causal attributions in terms of causal dimensions.

The heart of attribution theory is concerned with the examination of the individual respondent's phenomenology regarding the causes of events. That is, the subject is integrally involved as an active agent in the attribution process (McAuley et al., 1992). Allowing the subject to provide an open-ended attribution for an outcome and subsequently coding that causal ascription along the causal dimensions provides a methodology that is faithful to the attribution process. The separation of the original control dimension into the related constructs of personal and external control expands Weiner's conceptual thinking with respect to the dimensional placement of causal attributions.

Attribution Theory in Achievement Settings

Theoretical Connection

The nature of attribution within educational settings has been the focus of a significant amount of research in developmental, behavioral, motivational and cognitive studies. For students and involved personnel, the classroom is a source of multiple

affective experiences with motivational significance, including feelings associated with achievement success and failure, as well as, acceptance or rejection by others. In as much as there is a preponderance of studies involving children in all grade levels and adult populations, a limited amount of research is available on middle school students facing a barrier test in a domain specific area. The majority of the literature within this domain has examined attributions of academic outcome to four primary causes, (a) ability, (b) effort, (c) luck, and (d) task difficulty. These attributions can be traced to Heider's early statements regarding the nature of attributions (Weary et al., 1989). Weiner's focus on the internal/external and "can"/"trying" components reflect the strong impact of Heider's writings. In addition to the most commonly accepted achievement attributions of ability, effort, luck, and task difficulty, more recent studies include interest, strategy use, family and teacher influence as plausible attributions in educational settings.

In school settings, researchers have investigated the attributions of teachers, parents and students regarding students achievement performance, motivation, and behavior. Researchers have investigated and continue to investigate cultural (Carr, Bordowski & Maxwell, 1991), racial ethnicity and minority differences between students in varied student populations. However, the traditional methodologies ask children to respond to hypothetical scenarios or select from prescribed choices. Attribution theory, which focuses on students beliefs about why they succeed or fail, has served as the interpretative framework for numerous studies of student motivation (Vispoel & Austin, 1995).

Weiner's (1986) theory identifies three distinct kinds of emotional reactions to achievement outcomes. First, a general positive or negative, such as happiness and sadness, is based simply on the fact that one has succeeded or failed. These are "outcome-dependent, attribution-independent" emotions. They arise early in the temporal sequence and are relatively simple inasmuch as they are not determined by the assignment of causal responsibility. Second, causal search might be undertaken, particularly if the outcome was unexpected, negative, or important (i.e., contentment following success attributed to effort, or, gratitude if the success is attributed to help from others). These "attribution-dependent" emotions are more complex and more varied than outcome-dependent emotions. Third, there are emotions related to causal dimensions or the basic properties of perceived causes. The latter emotions are the most cognitively complex and enduring of the emotions linked to causal thinking. Locus is associated with pride and esteem-related affects such as hedonic bias to enhance or protect self-esteem. Stability is associated with future expectancy, helplessness, or hopelessness. Controllability is associated with a set of social emotions like guilt, shame, pity and anger (guilt when causes of personal failure are due to controllable factors; shame when personal failures are due to uncontrollable causes such as low ability. Public shame fosters embarrassment or humiliations; private shame; shame follows outcomes perceived as uncontrollable. Because guilt is elicited by failure due to a personally controllable factor, guilt sometimes serves as a motivator of achievement strivings. Student perceptions of their academic success or failure, along with analyses of why their performance was rated, as such, can have a significant impact on expectancies for future performance, mood, and subsequent academic behavior.

Developmental Stages

The nature of attributions within educational settings has been the focus of a significant amount of research. According to Frieze and Snyder (1980), in developmental studies, children's achievement attributions suggest that they become increasingly likely to attribute achievement outcomes to internal and controllable causes and less likely to blame external factors as they get older. The credibility of blaming teachers or instructional materials is likely to decrease as children continue to experience failure despite changes in teachers and course content (Licht, Kistner, Ozkaragoz, Shapiro, & Clausen, 1985). Studies indicate that causal attributions undergo developmental change. Young children commonly (a) have inaccurate perceptions of causality. As children age, their beliefs increase in accuracy (Paris & Oka, 1986; Stipek, 1993). A particularly salient change in causal attributions has been identified. Young children tend to equate effort and ability as causes, whereas older children tend to see effort and ability as inversely related . As a result, young children tend to attribute success to effort more than do older children. As children age, their beliefs become more highly related to achievement; there are changes in the relations between specific beliefs and achievement; attributions of success to ability is more highly related to achievement relative to attribution to effort (Stipek, 1993; Weiner, 1985).

There has been a growing awareness within the attribution literature of the need to examine consistency of attributions across situations (Frieze & Synder, 1980). Furthermore, the adequacy of the four causes suggested by Weiner, Bar-tal and Darom (as cited in Hiebert, Winograd, & Danner, 1984) challenge the adequacy of ability, effort,

luck, and task difficulty as sufficient attributions for the school setting. Strong endorsement of lack of interest as an explanation for failure is congruent with research findings that show declines in student motivation during the transition from elementary to junior high school (Anderman & Maehr, 1994; Eccles, Wigfield, Midgley, Reuman, MacIver, & Feldlaufer, 1993; Maehr & Anderman, 1993). Lack of interest has been attributed to a mismatch between students growing desire to make their own decisions about learning and their decreased opportunity to do so. Low interest poses less of a threat to one's self-worth. Lack of interest need not imply that one is lacking in ability, industriousness, commitment, or resolve.

Causal dimensions of stability are related to affect and expectancy of success (Graham, 1991). When achievement failure is attributed to a stable cause, such as low ability (aptitude), one is more likely to expect the same outcome to occur again than when the cause is an unstable factor, such as lack of effort. Differences between ability and effort on the stability dimension, rather than on the controllability dimension, account for expectancy increments and decrements (Graham & Brown, 1988). For example, in the cognition-emotion sequence, if a student failed an exam, the student would be frustrated and upset. If the student attributed this to "did not try hard enough," it would be followed by feelings of guilt, there is really something lacking (low self-esteem or lack of worth). Hopelessness follows leading to feelings of future failure (Graham, 1991). Covington and Omelich (1984) found that students who reported feeling guilty about their poor performance on a college midterm performed better on a make-up exam than did their nonguilty peers.

A study by Carr, et al. (1989) assessed the influences of parents and teachers attribution beliefs and strategic knowledge on the strategy acquisition of United States and German children. The attribution beliefs of parents and teachers were reflected in the children's attributions. Parents who believed in the importance of effort and subsequently gave their children strategic-oriented experiences were more likely to have children who were strategic. In addition, attribution patterns were uniquely related to performance in each country, indicating that the metacognition model may be culturally specific. The researchers in this study concluded that underachievers are culturally specific. In studies done in the United States, ability and effort appear to be the most dominant perceived causes of success and failure (Graham, 1991). When explaining achievement outcomes, students seem to attach the most importance to their perceived competencies and how hard they try. Attribution research has identified a number of antecedent cues, such as prior performance history and social norm information that tend to influence causal ascriptions (Kelley and Michela, 1980). The information conveyed by these antecedents seem to be rather direct, while other antecedents of attribution information may be more subtle and indirect.

Both situational and dispositional factors are known to influence self-ascriptions for success and failure. Several causal consequences or implications of causal thinking for achievement-related thoughts, feelings, and actions have been identified. These implications or consequences include (a) emotional reactions to success and failure, (b) expectancies for success as they relate to attribution re-training, (c) help-seeking behavior, and (d) a range of interpersonal consequences that follow inferences about

personal responsibility in others (Kelley and Michela, 1980). Causal linkages between attribution beliefs about the importance of effort and metacognitive systems have been supported in studies with average-ability, hyperactive, and underachieving children (Carr, 1991).

Weiner feels that grade point averages or exam performance provide inappropriate criteria for evaluating attribution theory (Weiner, 1986). Other researchers propose that the strength of attribution-achievement correlations is enhanced (a) when participants are able to consider nontraditional, but equally salient, attributions for success and failure, (b) when attribution studies are conducted in real classrooms rather than laboratories (Stipek & Weisz, 1981), and (c) when measures are context-specific (Marsh, 1984). In a study researching retrospective critical incident methodology, Vispoel and Austin (1995) found that with the exception of mathematics, most "student recalled" failure and success experiences did not involve testing, an activity that has been the focus of most attribution research in classroom settings. However, evaluation is such an integral part of our educational system, it is important to understand how students react to the feedback they receive about their classwork and tests. This is particularly true for the Literacy Passport Test because of the consequences of an unsuccessful outcome. Educators need the most appropriate assessments for reading. Some researchers suggest strongly that performance assessment supplement or be an alternative to pencil-and-paper tests in evaluating student learning (Herman, Aschbacher, & Winters, 1992; Linn, Baker, & Dunbar, 1991; Nickerson, 1989; Perrone, 1991; Stiggins, 1991).

Reading

A growing body of research indicates that there is a relationship between causal attributions and reading and writing achievement (Shell, 1995; Ehrlich, Kurtz-Costes, & Loridant, 1993). Attribution beliefs become pivotal in determining whether children succeed in an academic setting by influencing how they feel about themselves, and, indirectly, by influencing the development of metacognitive knowledge about reading (Carr, Borkowski, & Maxwell, 1991). Reading is such an important component of the elementary school curriculum, that many studies include measures of reading achievement in investigating children's attributions for school success and failure (Hiebert, Winograd and Danner, 1984).

Carr et al. (1991), in studies of underachievers, researched metacognitive models for reading-information-processing theories. Cognitive processes have their roots in the preexisting self-system, including self-esteem and attribution beliefs. As the child matures and advances academically, affective and motivational states become critical factors in determining performance, especially during the primary school years, by enabling children to take advantage of valuable learning experiences.

It is commonly theorized that success is attributed to stable internal causes while failure is attributed to unstable external causes (Newman, 1990). Differences in individual attributions indicate that the tendency to attribute success to internal causes and failure to external causes is more evident among males and individuals with high self-esteem. Stodolsky (as cited in Newman & Stephenson, 1990) cite a number of studies that suggest a differentiation in academic attitudes and values due to different intellectual

demands, instructional activities, and socialization experiences in math versus language-related subjects. A study by Marsh, Cairns, Relich, Barnes, and Debus (as cited in Newman & Stephenson, 1988) provides evidence that, with fifth graders, certain attributions (such as the belief that an outcome is due to ability) are specific to academic content, whereas other attributions (such as the belief that an outcome is due to effort or various external causes) are generalized across content areas. For example, children who believed that success in mathematics was due to ability did not necessarily make the same causal ascriptions for success in reading, but children who believed that success in math was due to effort generally made the same causal ascription for success in reading. This study provided additional information about whether middle school students display attribution patterns similar to those of adults and high school students for a situation specific outcome.

Hiebert, Winograd and Danner (1984) investigating the consistency of attributions across different reading situations noted that reading is a multifaceted capability and the contexts in which reading occurs varies. Bar-Tal (1978) found that in situations with a successful outcome, high-achieving children attributed their success to ability and effort, whereas they attributed their failures to a lack of effort or external causes (Bart-Tal, 1978). Low-achieving children, on the other hand, most frequently attributed their successes to factors beyond their control such as luck or the difficulty of the task while attributing their failures to a lack of ability. According to Frieze and Weiner (1971), achievement attributions are affected by the setting in which performance is assessed. The few studies that have considered children's attributions for reading have not specified the

reading context, but have relied on global descriptions of reading. Nicholls (1979) studied children's attributions when they did well or poorly in reading. Hiebert, Winograd, and Danner (1984) conducted a study designed to (a) examine children's attributions for different reading situations, (b) study children s attributions of their successes and failures to several causes in addition to those conventionally used, and (c) examine differences in attributions as a function of age and achievement. The results indicated that there are some variation in attributions for the different reading situations.

Other attribution studies of underachievement indicate that (a) there is a multidimensional view of the causes of underachievement, (b) underachieving children are less strategic and have negative attitudes toward reading, poorer self-perceptions, and an extrinsic orientation when compared with their appropriate-achieving peers (Carr, Borkowski, & Maxwell, 1991; Oka & Paris, 1987). Underachievement, defined by comparisons of potential to actual achievements (Ralph et al., 1966) is a widespread problem in the United States, with prevalence estimates ranging from 15% to 50% (Carr, Borkowski, and Maxwell, 1991). Attribution beliefs (particularly about effort) and self-esteem are believed to be particularly important in explaining metacognitive based behaviors of underachieving students because underachievers generally have low self-esteem and external attribution orientations (Carr, Borkowski, & Maxwell, 1991).

A prevailing thought is that underachievers fail to fully understand, or believe, that their existing knowledge, skills, and experiences are the product of their own abilities and efforts. Underachievers tend to attribute performance more to external or uncontrollable factors such as luck and to perform for external reward such as teacher

praise. Low self-esteem, characteristic of underachievers, was thought to be predicted by external attributions, which, along with self-esteem, were hypothesized to inhibit the development of reading awareness, and eventually, to result in poor performance on comprehension tasks (Paris & Cross, 1983).

Oka and Paris (1987) found underachieving children were less strategic and had negative attitudes toward reading, poorer self-perceptions, and an extrinsic orientation when compared with their appropriate-achieving peers. They concluded that the negative attitudes of underachievers are, in part, the product of attempts to save self-worth by undermining the importance of reading and its role in producing academic achievement. This perspective presents a multidimensional perspective of underachievement, with personality and motivation constructs interfacing with the development of efficient and effective cognitive skills.

Carr, Borkowski and Maxwell (1991), in a study with 98 underachievers and 102 achievers in grades three, four and five, predicted that the constructs of intellectual ability, reading awareness, self-esteem, attribution beliefs, and reading performance would differ only in respect to intellectual ability and metacognitive based attribution beliefs. For the achievers, self-esteem and attributions beliefs were expected to enhance reading performance through their impact on reading awareness. For the underachievers, assumed to have dysfunctional attribution beliefs about the utility of effort in skill-based learning, intellectual ability was not expected to promote the development of internal attribution orientations. In this study by Carr et al. (1991), the children's metacognitive knowledge was assessed on (a) evaluation (ability to evaluate components of reading

tasks and one's own skills), (b) planning (anticipating improved comprehension), (c) regulation (ability to regulate reading according to task and comprehension demands), and (d) conditional knowledge of reading (knowledge about the usefulness of specific strategies for particular problems). As predicted, attributions, self-esteem, and metacognition interrelated in a similar fashion to predict reading achievement for achievers and underachievers.

Qualitative and quantitative differences were noted (Carr et al., 1991). Qualitative differences included (a) multidimensional view of causes of underachievement, (b) for achievers and underachievers, attributions, self-esteem, and metacognition interrelated in a similar fashion to predict reading achievement, (c) underachievers differed qualitatively from achievers in the relationship between ability and attributions, whereas variations in ability predicted individual differences in the attribution orientations of the achievers, they did not predict the attribution beliefs of underachievers, (d) although the metacognitive-motivational system of underachievers did not appear dramatically different from that of achievers, underachievers (as a group) failed to develop an important connection between prior knowledge and internal attributions about self-efficacy (knowledge and abilities were disassociated from their beliefs about instrumentality, a key characteristic of metacognition in achievers). Quantitative differences were (a) achievers had higher self-esteem, stronger internal attributions about success, and enhanced reading awareness, (b) failure to develop enriched metacognitive knowledge about reading was ascribed, at least partially, to self-defeating attribution beliefs about controllability and to low self-esteem (Borkowski, Carr, & Pressley, 1987)

An argument for the importance of self-system variables, such as attribution beliefs and self-esteem in reading performance, can be found in the results of some studies using the discriminant and modeling analyses. The "pawn" experience, identified by deCharms (as cited in Carr et al., 1991), is a product of causal perceptions evidenced by low self-esteem, immature attribution beliefs, and poor metacognitive knowledge. Pawns believe that their lives are controlled by external forces. Such beliefs retard the development and use of the metacognitive system. Children who do not have a sense of personal control are less persistent, have poor expectancies for future tasks and negative self-concepts, and generally do not use viable learning strategies (Borkowski, Carr, & Pressley, 1987; Butkowski & Willows, 1980). In contrast, achieving children perceive themselves as causal agents, or "origins" (deCharms, 1976).

Guided by the known consequences of ability vs. effort ascriptions based on the stability-expectancy linkage, a number of training studies have attempted to change the failing student's attribution for failure from low ability to lack of effort (Graham, 1991). Target subjects are first selected on the basis of some maladaptive behavior or cognition. In a study (Dweck, 1975) with elementary students labeled as helpless, researchers sought to change the students attributions from ability to low effort

Diverse Populations

Underachievers. Attribution differences between achievers and underachievers have been found to distinguish achievers from nonachievers in academic settings. Bar-Tal (1978) found that in situations with a successful outcome, high-achieving children attribute their success to ability and effort, whereas they attribute their failures to a lack of

effort or external causes (Bart-Tal, 1978). Low-achieving children, on the other hand, most frequently attribute their successes to factors beyond their control such as luck or the difficulty of the task while attributing their failures to a lack of ability. With children, effort (Kurtz & Borkowski, 1984) and ability attributions have been linked with successful academic performance. Effort, considered to be an essential and controllable cause of academic achievement, is considered critical for complete development of the metacognitive system. Inappropriate attribution beliefs impede the acquisition of strategic and metacognitive knowledge because children with external attribution orientations have little reason to learn or to use strategies that they feel will not help them achieve.

Children's successes are dependent, in part, on their beliefs that effort counts and that they are in control of academic progress. From this perspective, dysfunctional attribution beliefs may alter the effectiveness of the entire metacognitive-motivational system and hinder the emergence of executive and metacognitive acquisition process, especially as it relates to acquiring, applying, and modifying strategies (Borkowski, Carr, & Pressley, 1987). The net effect is the development of a dysfunctional metacognitive system, resulting primarily from the failure to espouse and utilize effort-related attributions (Weary, Stanley, Harvey, 1089. p. 165). Therefore, educators and parents should consider carefully the cognitive, affective, and attributional well-being of children when evaluating academic progress and creating healthy educational climates.

Learned helpless students. In a study by Bar-Tal and Guttmann (1981) fourth and fifth grade mathematics pupils attributed their success to their own diligence, ability and teacher explanations. Pupils attributed their failure to lack of parents help and difficulty

of tests. Overall, students tended to blame their parents for their failure and considered effort and luck as influencing. A study of fourth, fifth and sixth graders examined attributions, learned helplessness, self-worth and attribution retraining. Students made attributions based on feelings of helplessness or to defend their self-worth. The study looked at the predictions of student motivated by self-worth and students experiencing learned helplessness. The predictions was that the two groups would differ in their attributions for failure and in their response to attribution retraining procedure.

Attribution analyses have been extended to include a special population of learned helpless children who display attribution patterns similar to underachievers (Carr, Borkowski, & Maxwell, 1991). While helpless children are strategically capable, in the face of failure, their maladaptive beliefs impede their ability to effectively alter, switch, or modify strategies as mastery-oriented do. According to Dweck and Reppucci (1973), this rigidity is due to their extrinsic attribution patterns. Studies of learning-disabled children (Jacobsen, Lowery, and DuCette, 1986 in Carr, Borkowski & Maxwell, 1991, p. 116) found dysfunctional attributional beliefs to be a major reason for the failures common to learning disabled children, who tend to attribute success to external factors such as task difficulty or luck and to attribute failure to internal factors such as effort, a pattern that is the reverse of the attributional beliefs of typical achievers. Implications are that more research is needed on the developmental roots of attributional patterns.

Academically challenged students. In studies of causal attributions and learning disabled students, the results indicated that the attribution beliefs of learning disabled children showed less persistence in mastering schoolwork which increases the likelihood

of continued failures and reinforces the children's perceptions of lack of control (Kistner, Osborne, & Leverrier, 1988). Children who attributed their failures to controllable variables (their efforts) were more likely to persist on tasks and were less debilitated by failures than were children who attributed academic problems to uncontrollable causes (Diener & Dweck, 1978; Licht et al., 1985). A long term study (Kristner et al., 1985) of learning disabled students grades 3-8 reported that attribution scores from the Effort-Ability-External scale (EAX) and Intellectual Achievement Responsibility (IAR) scale were not significantly related to academic gains as measured with the California Test of Basic Skills (CTBS). The tendency to attribute failures to insufficient effort was associated with greater academic progress when measured with the Peabody Intellectual Achievement Test (PIAT). Attributions to insufficient ability were negatively correlated with academic progress and learning disabled children. The tendency to blame external sources for failures, as measured with the External-Ability-External scale (EAX), did not correlate with school progress. In other studies involving learning disabled children (Kristner, Osborn, Leverrier, 1988), results indicated that achievement attributions were predictive of learning disabled children's academic progress as well as of their classroom behavior, thus emphasizing the need to include measures of achievement attributions in assessment of children supporting the notion that attribution intervention to alter maladaptive beliefs may improve achievement.

Minorities. A growing interest in attribution research focuses on differences in motivational patterns of minority children's causal attributions for success and failure (Graham & Long, 1986, p. 4). Attribution theory, unlike trait conceptions, deals with a

range of cognitive constructs such as perceived control, interpersonal evaluation, and expectancy for success and with an array of cognitively determined affects such as pride, guilt, shame, and hopelessness (Wiener, 1985, 1986) that are particularly relevant to minority populations. Since the publication of the Coleman Report (Coleman et al., 1966) these constructs continue to attract the attention of researchers studying the motivational underpinnings of minority children's school experiences.

Studies by Friend, Neale, Graham, Murray, Mednick, Willig, Harnisch, Hill, and Maehr (as cited in Graham, 1986) suggested that Blacks tend to rate external factors of task difficulty (ease) and luck as the most important determinants of success and failure. However, more recent studies have challenged this view by documenting "no differences" between Blacks and Whites in their causal preferences (Willig, et al., 1983). Differences found in a study of affective reactions suggested a more adaptive attribution pattern among Black females (Graham, 1984).

In a study on race, class and the attribution process, Graham and Long (1986) examined the content and process of attribution reasoning in seventh-grade students in hypothetical and real life situations. In this study, no evidence was found that Black children in general or disadvantaged Black children in particular display a less adaptive attribution pattern than do White children. There were no differences between racial groups in their perceptions of the underlying meaning of causal ascription. There were more cross-racial similarities than differences in the meaning of success and failure when it is conceptualized as an individual's cognitive representation of the causes of those outcomes. As stated earlier, once an outcome is perceived, a causal analysis is undertaken

and causes are located in dimensional categories. The next step in this motivational sequence relates causal dimensions to psychological consequences involving affect, expectancy, and interpersonal evaluation. While locus of causes is linked to esteem-related affect among both Black and White children, stability-expectancy was not consistent across the two studies when the outcome was failure and when the children were low-socioeconomic status Black. Children living in low socioeconomic environments reported higher expectancies relative to the other three groups, and their judgments were unrelated to causal stability in hypothetical situations. In real life situations, the stability-expectancy linkage appeared evident; expectancy judgments were consistent with others experiencing a similar outcome. The second difference was noted because a finding cited often in nonattributional comparative research is that disadvantaged and minority children tend to have unrealistically high expectations for success, even when achievement outcomes indicate otherwise (Entwisle & Hayduk, 1978; in Graham & Long, p. 12).

On academic self-concepts, a consistent but perplexing finding is that the self-concepts of disadvantaged Black children are equal to or higher than those of their white counterparts, despite the fact that Black children overall perform more poorly in school. This is high academic self-concept associated with low achievement (Rosenberg, 1979).

Wigfield (1988, p 76) in a study of second, third, fifth and sixth graders found that different performance conditions influence children's attributions. Wigfield assessed how self or task-focusing instructions influenced different-aged children's attributions for success or failure on a memory task, to determine whether there are developmental

differences in how attentional focus influences children's attributions. Gender differences were few. Older children attributed success more to task ease, younger children attributed both success and failure more to luck than did older children. Duval and Wicklund (1972) investigated task focus (direct attention to the task) and self-focus (person is made self-aware, as in evaluative situations or when performance is observed). Self-focus usually results in negative self-evaluations because individuals see negative discrepancies between their performance and their aspirations. Carver and Scheier (1986) proposed that although self-focus heightens individual self-awareness, it can produce either positive or negative self-evaluations, depending on whether performance outcomes are positive or negative. Focus of attention influences adult's attributions for performance (Duval & Wicklund, 1973). Subjects in a self-focus condition attributed both positive and negative outcomes more to personal factors than did subjects in a control group. Federhof and Harvey (1976), using a more involving task (i.e., subject is required to write as oppose to just listening), showed that such effects are particularly likely for positive outcomes, but not for negative outcomes (in Wigfield, 1988).

High anxious students. Recent developments stress greater emphasis on identifying the dimensions of causality (Meyer & Koelbl, 1982, p. 31). Weiner's three dimensions can be used to classify all of the specific causes of success and failure. Meyer's conducted a study to assess the dimensionality of students causal explanations for their performance on a test and to identify variables that might influence students use of these dimensions. Subjects were high school students enrolled in a French course. High-anxious students tended to attribute their performance more to uncontrollable

causes and less to controllable causes than did students low in test anxiety. Test performance was attributed more to stable and less to unstable causes when students grades were high, as opposed to low. Positive outcomes were attributed to stable causes with the implication that such outcomes would occur again in the future, whereas negative outcomes were attributed to unstable causes, suggesting the possibility of change in the future.

Hyperactive children. Reid and Borkowski, (1987) investigated the effect of the combined influence of attribution and self-control training on the short and long-term maintenance of strategic behavior, impulsivity, and beliefs about self-efficacy was assessed in seventy-seven underachieving, hyperactive children. Results indicated that children taught self-control plus attribution retraining persisted in their use of acquired strategies, maintained beliefs about the importance of effort, and displayed more mature memory knowledge. Severely hyperactive children, who had received the attribution boost showed decreased hyperactivity in the classroom and improved self-control. Results support the use of attribution and self-control training in treating strategic deficits in hyperactive and learning disabled children.

According to Borkowski, Weyhing, & Carr (1988), metacognitive processes and attribution beliefs are intimately related, and in combination, explain the emergence and use of a wide range of strategies and their generalization across settings. Individual differences in self-attributions (Marsh et al., 1984) influence the quality of school performance, appear related to self-concept, and are alterable by training. Findings from the study suggests that learning-impaired children often develop motivational and

personal problems as a consequence of their learning difficulties, including low self-esteem, inaccurate perception of their talents, and a tendency to attribute failure to diminished ability. Results of a similar study (Butkowsky & Willows, 1980) suggest that learning-impaired children often develop motivational and personal problems as a consequence of their learning difficulties, including low self-esteem, inaccurate perception of their talents, and a tendency to attribute failure to diminished ability.

Focus of the Present Study

Review of the literature indicates that research concerning the causal attributions and causal dimensions of middle school students regarding a mandatory barrier test is limited or nonexistent. The review of the literature supports the need for more research in the area of attribution theory, mandatory testing of middle school children, and reading achievement. Research using Causal Dimension Scale II with middle school children is nonexistent. Most of the research investigating attribution theory have been done with adult and identified special populations. No research was found that investigated the relationship between causal attributions and mandatory literacy tests for middle school students.

The absence of compelling empirical evidence linking attribution response to actual classroom achievement is one of the chief criticisms of attribution research (Graham, 1991, pp. 33-34).Much of the research is done committing what Russell refers to as "the fundamental attribution researcher error." The "fundamental attribution researcher error," suggested by Russell (1982, 1992), has the propensity of skewing data

thereby rendering inaccurate conclusions about dimensional concepts. An effective method of measuring causal dimensions is imperative.

In summary, this study focused on gathering, analyzing and presenting data related to the measurement of causal dimensions for a select group of middle school students required to pass reading on the Virginia Literacy Passport test. With this in mind, the researcher's focus was to (a) identify a reliable and valid method for measuring the causal dimensions of middle school students, (b) investigate the relationship between student outcomes and causal dimensions, and (c) determine if there is a significant difference between gender, ethnicity, and outcomes. Three research questions were addressed.

1. Is there a significant difference between the causal dimensions of middle school students who passed reading on the LPT and those who failed reading?
2. Is there a difference between the causal dimensions of males and females as they apply to the Virginia Literacy Passport reading test?
3. Is there a difference between the causal dimensions of minorities and nonminorities as they apply to the Virginia Literacy Passport reading test?

This study was undertaken to ascertain information about the causal dimensions of sixth grade students required to pass reading on the Virginia Literacy Passport Test. The demographic variables of gender and ethnicity were also investigated. The following hypotheses were selected for testing:

Hypotheses

1. Students who passed the reading portion of the LPT will attribute their outcome to more internal causes than students who failed reading.

2. Students who passed the LPT will attribute their outcome to more stable causes than students who failed reading.

3. Students who passed the LPT will attribute their outcome more to controllable causes than students who failed reading.

The following exploratory hypotheses were investigated.

4. There will be a significant difference between the causal dimensions of males and females on the Virginia Literacy Passport reading test.

5. There will be a significant difference between the causal dimensions of minorities and nonminorities on the Virginia Literacy Passport reading test.

CHAPTER III

METHODOLOGY

Introduction

Chapter three describes (a) the characteristics of the metropolitan area where this study is conducted, (b) the school district and the demographics of the population and sampling procedures, (c) test instruments used for collecting data, including evidence of reliability and validity, (d) the purpose and objectives of the pilot study, and (e) the statistical procedures used to analyze the data.

Research Location

Research was conducted at a middle school in a city that is part of the Southeastern Virginia region of Hampton Roads. Comprised of nine cities, six counties and 1.5 million people, this metropolitan area is the twenty-seventh largest Metropolitan Statistical Area (MSA) in the United States (Thompson, 1997). The city, with a population of 138,000, is situated in the center of this metropolitan area. From this strategic location, the city shares the economic diversification and growth of one of the world's largest ports, a billion-dollar aeronautics and space technology research laboratory, multiple military installations and industrial developments. However, in the midst of the economic growth and development, this city is confronted with the problems that exist in many urban areas (e.g., unemployment, high crime rate, school dropouts, teen pregnancy, and homelessness).

Just as school systems in many other urban areas, this school district also deals with problems of illiteracy, dropouts, teen pregnancies, crime, and violence, low

standardized test scores, and violence. Faced with recent changes in public assistance laws, the mission of educators is now intensified because they must insure that students coming through the system are prepared to enter the workforce. Illiteracy, in addition to taxing the school district financially, taxes the educational leaders to solve the problem of illiteracy and prepare an educated workforce.

This particular urban school faces a greater challenge because it serves the highest percentage of students living near or below the poverty line in the city. Middle school is recognized as a transitional level where many student dropouts. Like many schools in urban areas, this school is faced with problems of poor attendance, low standardized test scores, and violence. This city and school district is committed to reducing illiteracy and producing an educated workforce.

Population and Sample

The population for this study was composed of sixth grade students enrolled in an urban middle school in Southeastern Virginia. Students received the results of the reading portion of the Literacy Passport Test in the spring of 1997. Students sampled were in attendance on the day CDSII was administered. The students ranged in age from eleven to thirteen years old.

Sixth grade students in this study attend the fourth largest middle school in the district. The total enrollment of sixth, seventh, and eighth grade students at this school is approximately 1,112, averaging about 65% African American, 32% Caucasian, 2% Hispanic, 1% Asian or Native American. Total sixth grade enrollment at the time the CDSII was administered was approximately 350 students. All sixth grade students.

including students with special needs were contacted about participating in the study. Sixty-five percent of the students receive free or reduced lunch.

Participation in the study was voluntary for the students and teachers. In compliance with district policy, an Informed Consent Form (see Appendix B) was sent to the parents requesting permission for their child to participate. Students who returned Informed Consent Forms requesting that they not participate were asked to complete an End of School Survey (Appendix C). Five students returned forms saying that they did not have permission to participate. Of the 247 who responded, two hundred and twenty responded to all twelve items on CDSII. Of the 220 who responded to all twelve items. there were 124 were males and 116 females. The participants identified themselves as African American (136), Caucasian (76), Hispanic (7), Native American (3), and Other (13). Data analysis was computed for the 220 respondents who answered all twelve CDSII items. All sixth grade students were asked to participate including those with special needs.

Instrumentation

The Literacy Passport Test

Virginia's Division of Research and Testing, in search of a holistic reading assessment that was in compliance with Virginia's Standards of Learning objectives. selected a form of the Degrees of Reading Power (DRP) as the LPT reading assessment instrument. The description. research findings, and data analysis about the Virginia Literacy Passport reading test is the same data provided from research done with the DRP. For this study, LPT instead of DRP is used to refer to the data as it applies to the

Virginia Literacy Passport Test.

The LPT, developed by Touchstone Applied Science Associates (TASA), is a criterion-referenced test that gives information about the student's ability in relation to the difficulty of the test. LPT data is used instructionally to effect optimal match of reader and textual material and to measure change over time.

The reading test contains eleven nonfiction passages ranging in length from 300 to 500 words, arranged in order of difficulty from very easy to very difficult. It includes 77 multiple-choice items (presented in a deletion format) that measure a student's ability to predict a missing word by using context clues. Text explicit clues are given to get text specific information. The LPT cut score for the Commonwealth of Virginia is fifty-two (raw score of 43/42; Koslin, Zeno, & Koslin, 1987).

The LPT is confined to the domain and purpose of measuring how well continuous prose is comprehended as it is read. This constraint on the purpose and domain provides the test with widespread acceptance and face validity in that it fulfills the purposes of proving evidence to support the interpretation of the scores (Koslin et al., 1987). The LPT is also considered to have construct validity because students are expected to get the answers correct only by using cognitive processes required for prose comprehension, which is what the test purports to measure (Koslin et al., 1987).

Test objectives, as cited in Koslin et al. (1987) are (a) to be a useful outcome measure that forecasts what students can read in the "real world," (b) to enable students and school systems to establish measurable "real world" goals or expectations and to determine whether such goals have been met, (c) to measure change in the students'

ability to comprehend text over academically relevant periods of time, and (d) to provide useful information for matching the prose difficulty of instructional materials with student ability (Koslin et al., 1987, p.2).

The LPT is structured based on three major design concepts:

1. The passage/item specifications ensure that, by design, LPT tests engage those cognitive processes required for understanding the meaning of prose, while minimizing the chance that cognitive processes unrelated to prose reading comprehension can be used successfully to respond to LPT test items.

2. The use of a readability measure to interpret test results by scaling performance to the difficulty of text that can be read in the LPT prose passages.

3. The mathematical constructs of the Rasch model can be incorporated into a cognitive model that predicts how well prose is comprehended. Rasch item difficulties on LPT tests index the difficulty of prose, and Rasch ability estimates index the capability of understanding progressively more difficult text. The Rasch model has been incorporated into a cognitive model that explains and predicts performance on easy to difficult prose (Koslin et al., 1987).

Reliability measures of alternate form, test-retest, and replicate LPT measurements over time, indicate that the LPT tests are reliable. Evidence is presented that LPT tests are homogeneous and that the standard errors of measurement are acceptably low. Homogeneity of the LPT tests based upon several administrations is evidenced by Kuder-Richardson 20 (KR-20) reliability coefficients ranging from 0.94 to 0.96 (Koslin et al., 1987, p. 43). Alternate form and test-retest reliability, indicating the

degree to which a single test yields identical results when administered twice over a short period of time during which reading ability is not expected to change, was considerably high (r=0.90). Test administration of DRP forms 30 through 39 to grades four through ten yielded KR-20 coefficients from 0.93 to 0.97, with 59 out of 72 coefficients equal to or greater than 0.95. This indicates that LPT test have a high degree of internal consistency and reliability.

Design concept one, engaging the cognitive process required for understanding the meaning of prose, is addressed through the multiple choice cloze structure. As an effectiveness measure of prose comprehension, the authors (Koslin et al., 1987, p. 11) of the LPT tests feel that the tests should meet the following requirements: (a) Test passages should provide all the content information required to answer questions, (b) the difficulty of the questions must be linked to the difficulty or requirements for comprehending the prose, (c) the questions should require that the students read and understand more than one sentence in order to respond correctly, (d) the passages should eliminate, insofar as possible, the likelihood that any response other than the correct one in a set of options could be chosen as a sensible answer, and (e) the task should disrupt the reading process as little as possible.

The second design concept focuses on LPT readability measurement. Empirical evidence shows that readability validly measures text difficulty and that readability formulas selected for LPT tests are valid (Koslin et al., 1987). Readability can be assessed using Bormuth's mean cloze and MicRa-DRP readability formulas. The formula used to scale the readability of prose materials for the LPT test program is the

mean cloze formula developed by Bormuth (as cited in Koslin et al., 1987. p. 18).

The third design concept focuses on predicting how well prose is comprehended or test difficulty. The Rasch model is used in developing the LPT to (a) obtain an estimate of the difficulty of each item that is more or less independent of the distribution of student abilities in the sample, (b) obtain an estimate of ability for each raw score that is more or less independent of the distribution of item difficulties on the test, (c) obtain standard errors for every item difficulty and every ability estimate, and (d) calibrate test forms so that all test items are on a common difficulty scale (Koslin, 1987). The validity of the LPT prose comprehension model has been evaluated by determining the fit of LPT test data to the Rasch readability measures and showing that the regression equation predicting readability from the average Rasch item difficulty of LPT passages can be used to forecast precisely, from test results, how LPT prose passages are understood.

Causal Dimension Scale II

Causal Dimension Scale II (see Appendix A) is a twelve item bipolar semantic differential scale developed by Russell (McAuley et al., 1992). Permission to use CDSII in this study was granted by Daniel W. Russell, Ph.D., Iowa State University (see Appendix D). This semantic differential scale is an attitude measuring technique that allows a researcher to measure judgments of dimensions of a concept in a fairly circumspect way (Tuckman, 1978). Specifically, CDSII was designed to assess four causal dimensions for success or failure outcomes. CDSII assesses the four causal dimensions of locus, stability, external control and personal control on a twelve-item self-report scale. Subjects identify, in open response format, the main cause for their test

outcome and rate that cause on a nine point bipolar scale.

Validation studies (McAuley et al., 1992) provide evidence that CDSII is a valid research instrument with adult samples. Russell, McAuley, and Tarico (1987; Weary. 1989) compared the reliability and validity of three different measures of attributional dimensions. Following an exam grade, subjects were asked to make attribution for their performance. The dimensions underlying these attributions were assessed in three different ways: (a) Subjects were asked to indicate on Causal Dimension Scale I (Russell. 1982) their perceptions of the causes of their exam performance in terms of the locus of causality (internal-external), stability and controllability, (b) the subjects' attributions were coded by judges along the three attributional dimensions, (c) subjects were asked to rate the importance of a number of specified potential causal factors to their exam performance. These factors were classified on theoretical grounds as representing one end of the three dimensions of locus of causality, stability, and controllability. On CDSII, four factors were represented. A difference score of the sum of ratings of causes at one end of a continuum was subtracted from the sum of ratings at the other end. Results of the study provided support for directly assessing how subjects perceived the causes that they cited for their achievement outcome. In a number of studies, the open-ended measure and the causal dimension scale proved to be more reliable than other methods of assessing causal dimensions.

The reliability and validity of Causal Dimension Scale II (McAuley, Duncan. & Russell, 1992) is reported in four studies. Reliability was tested using Cronbach's coefficient alpha. All values were within Nunnally's (as cited in McAuley et al.. 1992. p.

569) acceptable range for instruments, ranging from 0.60 to 0.92 across four studies. In a study by Vallerand and Richer (1988), confirmatory factor analysis of items from the CDSII provided support for the hypothesized four-factor structure. All items were found to load significantly on the factor corresponding to the relevant causal dimension. The causal dimensions assessed by the CDSII represented empirically distinct constructs (McAuley, et al., 1992). Results supported CDSII as internally consistent and possessing adequate construct validity as a measure of how individuals perceive causes along causal dimensions.

The wording of CDSII was not modified in the previous studies. However, because of the age of the subjects in this study, the researcher developed extensive directions and a relevant vocabulary list for CDSII terms.

End of School Survey

An End of School Survey (see Appendix C), developed by the researcher, was administered to students who returned Informed Consent Forms saying that the parent did not want the student to participate. Data for the End of School Survey was not analyzed.

Research Process

No studies that used CDSII to assess the causal dimensions of middle school students required to pass a reading literacy test were found. Therefore, a pilot study was conducted in October and November of 1996 to ascertain the feasibility of CDSII being linguistically appropriate for sixth graders and to develop appropriate test administration procedures and directions. The pilot study was conducted using three groups of sixth and seventh grade students. The first group consisted of twelve beginning seventh grade

students; the second group consisted of sixty-four beginning seventh grade students; and the third group consisted of thirty sixth grade students. These students were recruited from the Hampton Roads area and were not a part of the main study.

With the first group, the researcher presented a scenario in which the outcome was positive or negative and asked the students to use CDSII to rate how the person in the scenario must have felt. The researcher answered all questions students had about the terminology on CDSII, then asked the students to complete CDSII. After completing the hypothetical scenario, the researcher asked the seventh grade students to give the outcome of their Literacy Passport Reading Test and complete CDSII reading silently. The two other groups were asked to self-report their outcome on a recent exam grade and then complete CDSII. Content analysis of the questions and responses of the students in the pilot study indicated that the students had difficulty with the terminology and directions. For example, a student in the first group circled the same responses given in the example. Questions about the terms indicated the need for more clarity of phrases and the nine point scale. Most of the students questioned the meaning of CDSII item #1, "That reflects an aspect of yourself," and "Reflects an aspect of the situation."

After analysis of the first group, the researcher used CDSII with the second group of sixty four seventh grade students. Four procedural modifications were made: (a) Seventh grade students were asked to self-report their LPT reading outcome from grade six, (b) a list was provided with the definitions of CDSII terms (see Appendix E), (c) the example scenario was not visible while students were completing CDSII, and (d) item #1 on the bipolar scale was verbally explained as a model for the other items. Statistical

analysis of the second pilot group identified the four factors of locus, stability, personal control and external control. However, the students had difficulty with Items #10 (over which you have power/over which you have no power) and #8 (under the power of other people/not under the power of other people).

Student questions, responses, and statistical analysis indicated that the students would be able to understand CDSII if all items on CDSII were read to the students as they completed CDSII, and the terminology would be defined when requested. CDSII was then completed with another group of thirty sixth grade students with all of the above modifications. Students indicated that they understood the instrument and had no difficulty with the directions.

After the last pilot administration, the researcher was satisfied that CDSII would be appropriate to use with sixth graders if the items were read aloud as the students completed CDSII and appropriate directions were given. Handouts were prepared and used for data collection: (a) INFORMED CONSENT FORM (see Appendix B), (b) TO THE TEACHER (see Appendix F) directions, (c) Causal Dimension Terminology (see Appendix G) , (d) DIRECTIONS FOR THE STUDENTS - STUDENT EXAMPLE (see Appendix H), (e) STUDENT EXAMPLE RESPONSE SHEET (see Appendix I), (f) LITERACY PASSPORT READING SURVEY (see Appendix J), script directions (see Appendix K), and (g) END OF SCHOOL SURVEY (see Appendix C).

Procedure

The researcher met with the administrators and teachers at the participating school during the first week in May. At the meeting, the study, using the example scenario, was

explained to and modeled for the teachers. Administration of CDSII was explained and modeled. For the actual CDSII administration, teachers had the option of administering CDSII themselves or having the researcher administer the scale. The teachers were told that participation was voluntary and that information about the students was confidential. Student names would only appear on the consent forms. All teachers received a teacher packet containing the forms developed from the pilot study. Teachers were then asked to distribute and collect the INFORMED CONSENT FORMS.

Scenario sheets with the CDSII items were made available for the teachers to use at their discretion. The researcher returned to the school to answer questions, collect consent forms and administer CDSII with the sample scenario for teachers who felt that this would be appropriate for their class.

Three days after the LPT results were mailed home, the researcher and teachers had the students complete CDSII. To ensure that administration procedures were standardized, teachers were given detailed script directions. The students were asked to circle their outcome (pass/fail), gender (male/female), race (Indian, Asian, Hispanic, Black, White, Other), and expectancy of a future outcome (yes/no). The researcher and teachers then read aloud the items on CDSII, providing any assistance necessary for understanding the terms on CDSII. Administration standardization was possible with explicit script directions. Actual completion time for most administrations was fifteen minutes.

The assessment measure asked the students to self-report their LPT outcome, race, gender and expectation of future outcome, provide an open-ended response for their

outcome, and then rate that response on CDSII. Self-reporting was necessary to maintain student anonymity, maximize participation and promote more honest responses to attribution items (Fetters, Stowe, & Owings, 1984; Sawyer, Laing, & Houston, 1988; Valiga, 1987). There is a substantial body of research that demonstrates a high correspondence between self-reported and actual grades. A stratified national sample of 17,565 secondary school students, showed that the rate of agreement between self-reported and transcript grades was 71% and that 97% of self-reported grades were within one letter grade of the corresponding transcript grade (Vispoel, 1995, p. 386).

Design

This study was an ex post facto study that compared middle school sixth graders' ascriptions for an exam outcome. The purpose was to test the main hypothesis that students who passed the reading portion of the Literacy Passport Test would attribute their success to more internal, stable, and controllable causes than students who failed.

Data Analysis

Data was analyzed using Statistical Packages for the Social Sciences (SPSS), version 6.1.1 (Norusis, 1994). All hypotheses were tested using an alpha level of 0.05. All of the causal dimensions were assessed via CDSII with (a) the locus scale representing internal and external attributes, (b) stability scale representing stable and unstable attributes, and (c) personal control and external control scales representing controllability attributes. Instrument reliability and validity was repeated in the main study to confirm the appropriateness of using CDSII with middle school students. The reliability and validity results were compared with the statistical results of other studies using CDSII

with adults and Nunnally's criterion for new instruments.

Although data was collected from several classes, the collective results were treated as one group. Four t-tests were used to relate outcomes (pass/fail) to causal dimensions. Analysis of variance was done to compare males and females, and minorities and nonminorities in terms of dimensional location of their attributions.

Summary of Methodology

The intent of this study was to focus on gathering, analyzing and presenting data related to the measurement of causal dimensions for a select group of middle school students taking the Virginia Literacy Passport test. The subjects were selected from an urban school district in a metropolitan area. A pilot study was conducted to determine if CDSII was a reliable and valid instrument for measuring causal dimensions for middle school students. Subsequent to the pilot, CDSII was used to ascertain self-reported causal attributions by these middle school students. With this in mind, the researcher's focus was to (a) use a reliable and valid instrument to measure the causal dimensions of middle school students, (b) determine if there is a significant difference between students who passed the reading literacy test and students who failed in terms of the dimensional space of their causal attributions, and (c) determine if there is a significant difference between the demographic variables of gender and ethnicity in terms of the dimensional space of their causal attributions.

CHAPTER IV

PRESENTATION AND ANALYSES OF DATA

Introduction

Chapter IV contains the results of all statistical analyses for the pilot and main study. All statistical analyses were completed using Statistical Packages for the Social Sciences (SPSS), version 6.1.1 (Norusis, 1994). Acceptable ranges were based on research findings from prior studies and Nunnally's (1967) criterion for new instruments. First, descriptive statistics, reliability coefficients, and factor analyses for the pilot study results are discussed. Second, specific data collection instructions are reported. The administrative procedures used are an important part of the data collection process because CDSII has not been used with middle school students. Third, descriptive statistics, statistical correlations for the scales and items, Cronbach's alpha coefficients, factor analysis and t-tests results for the main study are presented.

Pilot Study Data Analysis

Introduction

The pilot study was conducted in order to (a) to determine if CDSII was appropriate for use with middle school students, and (b) to improve test administration procedures. Factor analysis and reliability coefficients were computed for the pilot study. References to numeric items one through twelve in data analyses for the pilot and main study refer to the items on Causal Dimension Scale II (see Table 1). The dimension of (a) locus is represented by items 1, 6, and 9, (b) external control by items 5, 8, and 12, (c) stability by items 3, 7, and 11, and (d) personal control by items 2, 4, and 10.

Table 1

Causal Dimension Scale II

Instructions: Think about the reason or reasons you have written above. The items below concern your impressions or opinions of this cause or causes for your performance. Circle one number for each of the following questions.

Is this cause something:

1. That reflects an aspect of yourself	9 8 7 6 5 4 3 2 1	reflects an aspect of the situation
2. Manageable by you	9 8 7 6 5 4 3 2 1	not manageable by you
3. Permanent	9 8 7 6 5 4 3 2 1	temporary
4. You can regulate	9 8 7 6 5 4 3 2 1	you cannot regulate
5. Over which others have control	9 8 7 6 5 4 3 2 1	over which others have no control
6. Inside of you	9 8 7 6 5 4 3 2 1	outside of you
7. Stable over time	9 8 7 6 5 4 3 2 1	variable over time
8. Under the power of other people	9 8 7 6 5 4 3 2 1	not under the power of other people
9. Something about you	9 8 7 6 5 4 3 2 1	something about others
10. Over which you have power	9 8 7 6 5 4 3 2 1	over which you have no power
11. Unchangeable	9 8 7 6 5 4 3 2 1	changeable
12. Other people can regulate	9 8 7 6 5 4 3 2 1	other people cannot regulate

Note: The total scores for each dimension are obtained by summing the items, as follows: 1,6,9=locus of causality; 5,8,12=external control; 3,7,11=stability; 2,4,10=personal control.

Reliability

Table 2 shows the means, standard deviations, and alpha coefficients for the pilot study. Alpha coefficients ranged from a low of 0.29 to a high of 0.48 for the four subscales. The alpha coefficient for external control (items 5, 8, and 12) was notably low (0.29), however, the corrected item total correlation for item 8 was -0.0317, indicating that item 8, as worded, was possibly an unreliable measure of external control, thus attenuating the reliability for the entire scale. Based on Nunnally's (1976) research, an alpha coefficient of 0.50 or above was deemed satisfactory for indicating that the scale had adequate reliability. Using this criterion, none of the alpha coefficients for CDSII, as administered, demonstrated adequate reliability. However, analysis of the administration procedures indicated that reliability could improve with modifications in the administration process.

Table 2

Pilot Study Means and Standard Deviation and Alpha Coefficients

Dimension	n	M	SD	Scale α
Locus of causality	64	6.75	0.19	0.43
Stability	62	5.88	0.51	0.48
Personal Control	64	6.72	0.13	0.46
External Control	64	4.72	0.45	0.29

Validity

The factor analysis revealed four factors that explained from 9 to 21% of the variance (see Table 3). The factor loadings ranged from a low of -0.01 for item 8 on the external scale to a high of 0.82 for item 3 on the stability scale (see Table 3). The total variation accounted for by all four factors was 56%.

Table 3

Pilot Study Factor Structure

Items	External	Personal	Stability	Locus
Percent of Variance	20.6	14.6	11.8	9.0
5	**0.80**	0.15	-0.06	-0.06
12	**0.78**	-0.23	0.20	0.27
8	**-0.01**	0.03	0.07	-0.80
2	-0.08	**0.55**	0.11	0.35
4	0.00	**0.65**	0.32	0.00
10	-0.54	**0.19**	0.21	0.20
3	0.15	0.14	**0.82**	0.04
7	-0.30	0.03	**0.56**	0.23
11	-0.34	-0.34	**0.48**	-0.17
1	-0.00	0.34	0.58	**-0.12**
6	-0.02	0.31	0.09	**0.61**
9	-0.09	0.77	-0.03	**0.07**

A factor loading of 0.50 or above was deemed satisfactory based on Nunnally's (1976) criterion for new instruments. Based on this criterion, seven of the twelve items loaded satisfactorily on the appropriate scales. These items were 5 and 12 for the external scale, 2 and 4 for the personal control scale, 3 and 7 for the stability scale and item 6 on the locus scale (see Table 3).

Pilot Study Summary

Based on discussions with the subjects, the reliability analysis, and the factor analysis, the researcher developed a set of directions that defined the terms and concepts on CDSII. The researcher concluded that defining the terms and concepts for the students would increase the scales' reliability and also increase the validity of the factor structure. As a result, the researcher administered CDSII again to a third group of thirty-five students to confirm that the students understood the new directions. The students indicated that they understood the terms and concepts on CDSII. The objective of the pilot study was satisfied. The researcher then concluded that with the proper instructions, CDSII was an appropriate instrument for sixth graders.

Main Study Data Analysis

Introduction

This study focused on gathering, analyzing and presenting data related to the measurement of causal dimensions for a select group of middle school students required to pass the Virginia Literacy Passport test. The purpose of the study was to (a) determine if there is a significant difference between students who passed the reading literacy test and students who failed in terms of the dimensional space of their causal attributions, and (b) determine if there is a significant difference between females and males and minorities and nonminorities in terms of their causal dimensions.

Several issues are presented here: (a) test administration, (b) demographics of sample, (c) handling of data, (d) analysis to determine the degree of reliability and validity of CDSII, (e) t-tests for pass/fail outcomes, (f) correlation coefficients for the dimensional variables, and (g) analysis of variance computation for gender and ethnicity variables.

Test Administration, Demographics of Subjects, Handling of Data

Causal Dimension Scale II was administered by the researcher and five teachers. Causal Dimension Scale II was administered to 247 sixth graders. The amount, type and distribution of missing data were evaluated. Because of the small number of items for each factor, the decision was made to eliminate data of subjects who listed no open-ended response, did not indicate an outcome, and/or failed to respond to all twelve items. Twenty-seven participants were eliminated. Analyses were computed on data for 220 subjects. The actual sample consisted of 119 Blacks, 69 Whites, 8 Asians, 6 Hispanic, 3 Indians, and 15 others.

Instrument Validation

Table 4 shows the means, standard deviation and alpha scores for CDSII for the main study. Mean scores for the four scales ranged from 4.37 to 6.87. The standard deviation ranged from 4.55 to 5.99. Alpha coefficients ranged from a low of 0.46 to a high of 0.62 for the four subscales. Cronbach's alpha coefficient for external control (items 5, 8, and 12) at 0.61 was higher than alpha coefficient of 0.29 in the pilot study. Based on Nunnally's (1967) criterion for new instruments, the reliability coefficient of 0.62 indicated that CDSII was a reliable measure of stability, personal control, and external control for this study. The alpha of 0.46 for the locus scale was below the criterion, indicating that it was an unreliable measure for the locus scale. The locus scale

was included in further analyses for comparison with previous studies.

Table 4

Descriptive Statistics and Alpha Coefficients

Dimension	n	M	SD	Scale α
Locus of causality	220	6.66	4.55	0.46
Stability	220	5.25	5.44	0.50
Personal Control	220	6.87	4.89	0.62
External Control	220	4.37	5.99	0.61

Factor Analysis

Table 5 shows the factor loadings for the main study using a varimax rotation. The factor analysis revealed three of the four factors suggested by Russell (1992). The three factors revealed were external control, stability, and a third factor which appeared to be an amalgamation of the personal control and locus dimensions.

The fact that the personal control and locus dimensions loaded on the same scale indicated that the items for these two scales may be measuring similar concepts. Nonetheless, the two scales were analyzed separately in all statistical analyses so that the results from the present study could be compared with the results from previous studies.

Table 5

Factor Structure for CDSII

Items	Personal/Locus	External	Stability
5	-0.03	**0.58**	0.05
12	-0.13	**0.50**	-0.04
8	-0.11	**0.71**	0.09
2	**0.68**	-0.20	0.14
4	**0.67**	-0.05	-0.16
10	**0.50**	0.01	0.14
3	0.11	0.05	**0.60**
7	0.22	-0.02	**0.35**
11	-0.00	0.09	**0.51**
1	**0.33**	-0.13	0.20
6	**0.37**	-0.11	0.26
9	**0.39**	-0.28	0.32

Note. N = 220

t-tests

Four t-tests were completed to test the hypothesis that students who passed reading on the LPT would attribute their outcome to significantly more internal, stable, and controllable causes than students who failed. The t-tests results indicated that students who passed and students who failed were significantly different on all

dimensions except external control (see Table 6).

Table 6

t-tests for Pass /Fail Outcome

Variable	Number	Mean	SD	SE	t-value	df	Sig
Stability							
Fail	51	4. 45	5.70	0.80	3.49	76.42	0.00*
Pass	169	5.49	5.16	0.40			
Personal							
Fail	51	5.65	4.70	0.66	6.40	78.38	0.00*
Pass	169	7.23	4.40	0.34			
Locus							
Fail	51	5.60	4.61	0.65	5.77	75.21	0.00*
Pass	169	6.98	4.08	0.31			
External							
Fail	51	4.48	5.09	0.71	0.45	218.00	0.65
Pass	169	4.34	6.25	0.48			

Note. *p < .05

On the measure of stability, the average mean score for the students who passed was 5.49, while the average mean score for the students who did not pass was 4.50. Essentially, students who passed attributed their outcome more to stable attributions than

students who did not pass. The average mean score on the personal control variable for students who passed was 7.20, while the score for students who did not pass was 5.70. This indicated that students who passed made more personal control attributions than students who failed. The two groups of students were also significantly different on locus of causality. The average mean scores for locus were 6.98 for students who passed and 5.60 for students who did not pass. Students who passed made more personal control attributions than students who failed.

There were no significant differences between the pass and fail groups on perceived external control. The average mean scores were 4.34 for students who passed and 4.48 for students who did not pass. Students who passed and students who failed both had scores close to the median score of five indicating that all students tended to feel that they had slightly more control than others (see Table 6).

Analysis of Variance (ANOVA)

A two-way between-subjects ANOVA was completed to answer the following questions: (a) Is there a difference between males and females on the dimensions of locus, stability, external and personal control? (b) Is there a difference in the responses of minorities and nonminorities on the dimensions of locus, stability, personal control and external control? (c) Is there a significant interaction between males and females, and minorities and nonminorities in terms of their scores on CDSII?

For the two way ANOVA (gender by ethnicity), the only significant difference

was a two-way interaction between males and females and minorities and nonminorities in terms of external control (see Table 7). Nonminority boys had higher external scores than nonminority girls, whereas, minority boys had lower external scores than minority girls.

Table 7

Two-way Analysis of Variance for Gender and Ethnicity

Variable	Locus		Stability		Personal		External	
	df	F	df	F	df	F	df	F
Gender	1	2.85	1	1.41	1	1.22	1	0.88
Ethnicity	1	0.11	1	0.14	1	0.03	1	0.90
2-Way Interactions	1	0.42	1	3.53	1	1.16	1	3.81*

Note. N = 214

*p < .05

Summary of Analyses of Data

The factor analysis revealed three of the four factors expected. The three factors were external control, stability, and a third factor which appeared to be an amalgamation of the personal control and locus dimensions. The fact that the personal control and locus

dimensions are loading on the same scale indicates that the items for these two scales may be measuring similar concepts. Results of the t-tests indicated that students who passed and students who failed were significantly different on all variables except external control. Students who passed reading made more internal, stable, and personal control attributions than students who did not pass.

A two-way between-subjects ANOVA was completed to answer the following questions: (a) Is there a difference between males and females on the dimensions of locus. stability, external control and personal? (b) Is there a difference in the responses of minorities and nonminorities who passed or failed the LPT on locus, stability, personal control and external control? (c) Is there a significant interaction between males and females, and minorities and nonminorities on the CDSII dimensions of locus, stability, personal control, and external control?

The ANOVA indicated a significant interaction between gender and ethnicity. There was a significant interaction between gender and ethnicity on the external control scale. Minority males had lower external control scores (others have no control) than minority females. Nonminority males had higher external control scores (others have control) than nonminority females.

CHAPTER V

FINDINGS AND DISCUSSION

Introduction

Chapter V consists of (a) a summary of the significant findings of this study, (b) a discussion and interpretation of the results of the pilot and main study, (c) theoretical, instructional, practical and policy implications of the study, and (d) suggestions for future research.

Summary of the Study

Purpose

This study focused on gathering, analyzing and presenting data related to the measurement of causal dimensions for a select group of middle school students required to pass reading on the Virginia Literacy Passport test. With this in mind, the researcher (a) identified a reliable and valid method for measuring the causal dimensions of middle school students, (b) investigated the relationship between student outcomes and causal dimensions, (c) determined if there were significant differences between male and female outcomes on the causal dimensions of locus, stability, personal control and external control, and (d) determined if there were significant difference between minority and nonminority outcomes on the causal dimensions of locus, stability, personal control and external control.

Pilot study

Alpha coefficients, factor analysis, and the researcher's interpretations were used as the basis for using CDSII to measure the causal dimensions of sixth-graders. Three

administrations of CDSII were completed with a total of 106 sixth grade and beginning seventh grade students. Collaboration with educational experts lead to the decision that with specific administration procedures, CDSII would be an acceptable measure of causal dimensions for this study.

Main Study

An ex post facto design was used to (a) assess the causal attributions by measuring the causal dimensions of sixth grade students who passed or failed the Virginia Literacy Passport Test, and (b) test CDSII in a field setting with middle school students. Statistical analysis was computed on two hundred twenty students who completed CDSII within two days after they were informed that they had passed or failed reading on the LPT. Reliability and validity analyses of CDSII were repeated with the main study to substantiate the results from the pilot study. An overall mean reliability coefficient of 0.55 indicated that CDSII was a reliable measure to use with middle school students. In the main study, three factors were revealed rather than the expected four. Factor analysis revealed the factors of external control, stability, and an amalgamation of personal control and locus rather than the four factors identified in the pilot study and the research literature.

Results of t-tests indicated that students were significantly different from each other on all dimensions except external control. Students who passed attributed their outcome to more stable attributions than students who did not pass. The average mean score on the personal control variable for students who passed was significantly higher than the score for students who did not pass. Students who passed made more personal

control attributions than students who failed. Students who passed and students who failed were also significantly different on locus of causality. The average mean scores for locus were higher for those who passed than the mean scores for students who did not pass. There were no significant differences between the groups on perceived external control. Correlation coefficients indicated that personal control and locus correlated higher than other factors. Personal control and locus loaded together on the factor analysis, so these two scales appeared measure similar concepts.

A two-way ANOVA examining gender by ethnicity indicated that the only significant difference was a two-way interaction between males and females and minorities and nonminorities in terms of external control. Results indicated that minority males had lower external control scores (others have no control) than minority females. Nonminority males had higher external control scores (others have control) than nonminority females.

Causal Dimension Scale II

Prior to this study, the researcher found no studies that assessed the causal dimensions of middle school students using CDSII (see Appendix A). A relevant concern was the appropriateness of the terms and phrases on the CDSII bipolar scale. The pilot study was conducted in October and November of 1996 to ascertain the feasibility of CDSII being linguistically appropriate for young children. CDSII was administered three different times to three different groups. Statistical analysis was computed for the second group of sixty-four students. The pilot study yielded evidence that with specific directions. CDSII was an appropriate instrument to use with middle school students.

These specific instructions included definitions for scale terminology and directions for completing bipolar scales.

Discussion of Findings

Two problems existed with using CDSII: (a) The words and phrases initially were considered too difficult for middle school students, and (b) CDSII, a nine-point bipolar scale, was unfamiliar to the students. The first pilot administration was done with this in mind. However, the seventh graders at that sitting had little difficulty with the words and terms. The first pilot group read the instrument silently after completing CDSII for a hypothetical scenario. Three students asked for explanations of the phraseology for items 1, 5, 8, 12 which read, respectively, (a) "that reflects an aspect of yourself" and "reflects an aspect of the situation," (b) "over which others have control" and "over which others have no control," (c) "under the power of other people" and "not under the power of other people," and (d) "other people can regulate" and "other people cannot regulate." The students also asked for directions on how to complete the bipolar scale. The researcher felt that these were reasonable questions for any age group, and that CDSII was acceptable for this study with the following modifications (a) provide definitions for the terms and explanations for phrases and (b) read CDSII aloud to the students as they complete the scale. The wording was not changed so that comparisons with other studies would not be confounded.

Reliability and validity analysis of CDSII with the main study indicated that items 5, 8, and 12, representing the external control scale, were satisfactory for middle school students. However, to a degree, items 1, 6, and 9 (locus) and items 2, 4, and 10 (personal

control) seemed to measure similar constructs. This supports Russell's argument for the distinction of personal control and external control.

Factor analysis, used to determine the internal statistical structure of a set of variables (Nunnally, 1967), was used in this study to determine the factorial composition of each of the four proposed causal dimensions. The factor analysis revealed three factors. It was concluded that the three factors being measured were external control, stability, and a third factor which appeared to be an amalgamation of the personal control and locus dimensions (see Table 5). The fact that the personal control and locus are loading on the same scale indicates that the items for these two scales may be measuring similar concepts. Nevertheless, the researcher decided to analyze the results for the four scales separately so that the results could be easily compared with previous research findings.

Implications for Future Research with CDSII

Researchers who use CDSII with middle school students should (a) provide instructions appropriate for pre-adolescents, and (b) consider rewording some of the items. In the main study, item 8 (see Table 5) had a high factor loading, however, the corrected item total correlation for item 8 (external control scale) in the pilot study was -0.031 indicating that item 8 may present a problem for middle school students. Considering the corrected item total correlation for item 8 (external control) and alpha coefficient for items 1, 6, and 9 (locus scale) in the main study, researchers using CDSII with middle school students should consider rewording items 1, 6, 8, and 9.

Since all students in the Commonwealth of Virginia are required to take the LPT. more research on causal attributions is suggested. To collect data in attribution studies. the data collection process and instruments in future studies need to be appropriate for low-achieving and high achieving students. The cognitive and emotional competencies of low achieving students include (a) tendency to be inattentive, (b) easily distracted. (c) low self-esteem. (d) reflect narrow range of interests, and (e) fear of failure (Schurr, Thomason. & Thompson. 1995). When considering the characteristics of this population and the brief time span available for assessing an outcome-dependent attribution. a concise, linguistically appropriate instrument is necessary. CDSII has the potential of providing a concise effective instrument for measuring causal dimensions. CDSII has obvious potential for continued use with middle school students. It is a concise instrument that is sensitive to the cognitive competencies of preadolescents and allows the researcher to collect data from a large sample quickly. The fundamental researcher error (McAuley et al., 1992) is reduced when the students rate their own literal responses as internal, external, stable, unstable, and controllable or uncontrollable.

Main Study Discussion

Research Question Number 1

Question. Do middle school students differ significantly on the causal attributions and dimensions for success and failure outcomes on mandatory reading tests, specifically the Virginia Literacy Passport Test?

Hypothesis. The hypothesis tested stated that middle school students who passed reading on the LPT would ascribe their success to more internal. stable and controllable

causes. Students who did not pass the reading portion would attribute their outcome to external, unstable and uncontrollable causes.

The t-test results (see Table 6) supported the main hypothesis that students who passed would attribute their success to internal, stable, controllable causes, while students who did not pass would attribute their outcome more to external, unstable, uncontrollable causes. Students who passed and students who failed were significantly different on all dimensions except external control. There were no significant differences between the pass and fail groups on perceived external control. Students who passed and students who failed both had scores close to the median score of five indicating that all students tended to feel that they had slightly more control than others.

According to Weiner's attributional theory of motivation (Weiner, 1986), as discussed in the literature review, the dimensional constructs are associated with other psychological consequences in the following ways: (a) Locus is associated with pride and self-esteem, (2) stability is associated with expectancy of success, and (c) controllability is associated with shame, guilt, and gratitude. Commensurate with the theory, a significant number of middle school students who did not pass the reading test made attributions to causes they felt were outside of them, unstable, and over which they had no control.

In this study, the students who passed and students who failed attributed the outcomes mostly to ability or effort. This supports the achievement research findings of other achievement studies. Effort or ability attributions are also consistent with the developmental egocentric views of preadolescents (Schurr, Thomason, & Thompson,

1995). The high number of students indicating reasons of effort or ability is consistent with desire of this age group to gain a sense of independence and accept responsibility rather than place responsibility elsewhere.

Implications for Instructional Programs

Motivating preadolescents can be particularly difficult due to the environmental, cognitive, emotional, physical, social, and character development of this student population. Findings from research studies indicate that some children give up in the face of failure because they attribute negative outcomes to ability deficits rather than to deficient effort (Diener & Dweck, 1978; Dweck & Repucci, 1973). Forsterling (as cited in Cooley, 1994) noted that knowledge of underlying cognitive and schematic patterns is important in designing intervention strategies to improve persistence in learning. Changing attributional styles is believed to positively influence academic behavior. Therefore, changing the inappropriate attributions of middle school students has implications for changing academic performance and behavior in reading (Weary, 1989). Findings from this research study have implications for instructional programs and classroom practices that build self-esteem, independence and autonomy, attribution retraining, and parental involvement. Curriculum implications include affective education, attribution retraining, and enriching the home reading environment.

1. In the classroom, teachers should ascertain the students' causal beliefs and assist students in finding ways to overcome the debilitating effects of low ability attributions for failure. Teachers can train students to attribute their failures to more appropriate causes than lack of ability and lack of effort. The dimension of locus is associated with pride and

self esteem. The dimension of locus is described with the terms "reflects an aspect of yourself or reflects an aspect of the situation," " inside of you or outside of you," and "something about you or something about others." This dimension was among the most frequent responses for students who failed indicating that they made attributions to things "outside of themselves." In theory, according to Kelley (as cited in Weiner, 1992), responses indicating factors outside of the person are often ego-enhancing, ego-saving attributions. Therefore, students who failed may be experiencing affective reactions of low self-esteem or shame. To improve self-esteem, the teacher can give work assignments at the ability level of the student so that the student can experience success. When more difficult work is introduced, the teacher can insure that the students have the skills necessary to do the work.

2. For children who believe that they perform poorly in reading because of low ability or lack of effort, the teacher can (a) structure the classroom assignments around task-oriented or group-oriented goals that emphasize the learning process or mastery rather than ego goals that emphasize competition among students, (b) encourage students to conceptualize ability as a collection of skills that may be continuously improved over time, (c) avoid grouping students by ability within and between classrooms, and (d) refrain from giving students feedback that communicates low ability. Knowing if the student has low ability attributions only for reading failure provides insight for the teachers. Teachers can detect dysfunctional attributional patterns that require special attribution intervention strategies.

3. In this study, students who passed and students who did not pass indicated that they had slightly more control than others in this situation. On the surface, it appears that middle school students are accepting responsibility for their performance. However, consideration of the developing social competencies (Schurr et al., 1995) of this age group presents the possibility that the students are demonstrating a desire for more autonomous, assertive and independent behavior. Responding that others have little or no control could indicate that preadolescents seek to demonstrate that they are in charge. Understanding this about the students, the classroom teacher can structure lessons and activities in which the students are empowered to assume responsibility for instruction and learning. These activities can include peer tutoring, cooperative learning arrangements, and exploratory learning. These activities could take place in an environment where the students are not afraid to take risks.

4. Attribution retraining is intended to change the thinking of children about why they succeed or fail in reading. A tally of the literal responses of the students in this study indicated that most students, regardless of the outcome, made effort and ability attributions. Reading curricula and instructional programs frequently focus on instructional strategies to the exclusion of affective reasons for reading difficulties. Reading instructional programs can be designed to teach students to learn to attribute academic failure to causes other than lack of ability. The teacher can design lessons focused on how a person becomes a good reader. These lessons can include sessions on (a) how students learn best, (b) how we read, (c) the importance of language and meaningful conversations, and (d) the role of practice in learning to read. The students

can be taught that the lack of vocabulary infusion, not necessarily ability or effort, is responsible for their reading difficulties.

Students are often unaware of the role of a good reading environment and what makes a good reading home environment. Although these concepts seem difficult, the content could be presented in formats appropriate for middle school students. What the students need to know is that the reading deficiency can be attributed to a lack of skills rather than to a lack of ability or effort.

5. Attribution retraining has implications for teacher, student, and parental involvement. Attribution origination extends attribution formation to the home. Good reading ability is promoted through early reading stimulation and a good reading environment. For instance, some students are in an environment where the parents do not value education personally and has imparted that same attitude to the children. Middle school children are minors and as such, are influenced consciously and unconsciously by their environment and immediate surroundings. The children cannot be separated from their home environment. A home environment void of reading stimulation predisposes children to reading failure. A reading environment questionnaire or survey can direct the children's attention to the number of books in the home, time spent reading with parents, time spent at the library, the amount of television watched, and time spent reading in the home. A deprived home reading environment affects children's expectations, confidence and intrinsic motivation to take on literacy as a serious venture. When children become aware of the things in the environment and home that promote good reading, they are able to attribute the lack of reading success to deficits that can be overcome rather than ability.

Children are more likely to be motivated to learn to read if they feel reading difficulty is caused by deficits that can be overcome.

6. Teaching children to understand the reading process can help them make more accurate attributions for reading difficulty. Many children are deficient in vocabulary knowledge and word recognition skills. English is like a foreign language if students do not have appropriate vocabulary knowledge. Lack of vocabulary interferes with reading eye sweep and fluency. While the child may be attributing his reading difficulty to lack of ability, a more appropriate attribution may be lack of vocabulary or word recognition skills. These are things that children may feel they can do something about.

Teaching reading strategies alone or emphasizing the role of effort in isolation is not sufficient for children who make low ability attributions for reading failure. Intensified instructional reading programs, including program-specific attributional retraining for students and parents and teachers provide more assistance for children who read poorly.

Implications from an Urban Policy Perspective

The major causes attributed by most children to explain testing outcomes have an internal locus of causality such as ability and to some degree effort (Frieze and Synder. 1980). An internal ascription for reading failure produces strong affective reactions of pride or shame. It follows then that testing situations have a powerful impact on the students self-esteem. Policy makers in designing the best environment for teaching reading should consider providing the best environment for the students by instituting cross-curriculum reading instruction. implementing attribution retraining for parents. students. and teachers. Several implications for staff development. program design.

program implementation and community involvement, and affective curriculum can be considered:

1. Policymakers can implement staff development initiates to educate teachers about the role of causal attributions so that the teachers can be aware of or recognize other forces that impede student progress. Teachers should be made aware of the debilitating effects of longstanding , antecedent beliefs about the sources of success and failure experiences in the reading domain. Not only should teachers be made aware of harmful attributions. teachers should be taught attributional strategy instruction (Borkowski et al.. 1988). This would enable the teacher to provide the students with a number of strategies from which to choose in order to teach students how to solve reading problems.

2. Implications for program design include reading enrichment courses. Directors of educational programs should become more cognizant of the importance of negative, often inappropriate, program-specific attributions and how these longstanding beliefs hinder the students' ability to profit from the educational process. The implications are that school districts should insure that their reading programs enhance the emotional development of the middle school student. Reading remediation programs that remove the students from the classroom and/or building add to the students' lowered self-esteem. Compounded possibly with a preexisting state of low self-esteem, reading becomes a source of distress for the student. Middle school students are in an egocentric developmental stage which can result in them becoming demoralized in the education process. Stories abound of remediation programs that require the students to ride separate buses to separate buildings for reading remediation. It is an enormous task to convince students that they learn to read

when they have been removed from an entire building and peers because they did not achieve. Reading instruction in an environment that can be contrived as punitive is not likely to be embraced by students who have already failed the literacy test.

3. For program implementation and community involvement, urban policymakers can institute district wide reading enrichment programs for parents and students. Students are making attributions to ability when, in fact, the home environment may promote reading deprivation. Reading enrichment programs rather than reading remediation programs would be more enjoyable for parents and their children. These programs, designed to motivate parents to become avid readers, supporters, and role models for their children, could be instituted together with businesses. Reading enrichment programs could stress vocabulary infusion at home and school, language, debate, public speaking, literature, public speaking, and reading for enjoyment and critical thinking.

4. Implications are for a more affective curriculum. This study supports research that reports that most students who failed reported attributions that are associated with low self-esteem. It is significant that this has been identified in middle school students required to pass a reading test. For students who have difficulty reading, educational policy decision makers and implementors should provide reading enrichment and instruction in cross-curriculum programs with reading teachers and reading specialist. School administrators should consider only reading and remedial instruction that sustains the student in the regular instructional program. Reading specialists and reading teachers can be engaged as instructors and resource personnel for cross curriculum instruction. Students benefit more from overall improved academic performance in the regular school

environment. The anticipated outcome would be higher self-esteem for the students and increased motivation.

5. The extended role of public schools could incorporate attribution retraining for the parents and students. Children are influenced by their parents. Retraining for those parents who have had negative educational experiences related to reading should take place simultaneously. This would reinforce attributional retraining for the students resulting in improved reading achievement. Lack of achievement attributed to inappropriate strategies would result in increased motivation and reading improvement.

Implications for Future Research

More attribution research with middle school students is needed. Future research should (a) investigate the attributions that middle schools students make for success and failure on required reading tests, (b) identify appropriate assessment instruments. (c) and investigate the effects of attribution retraining on reading progress.

Specifically, more information is needed on the effect of required reading tests for middle school students. Research of this topic could provide educators with information pertinent for selecting appropriate assessment procedures and providing additional services for students who do not meet requirements.

CDSII has been field tested for the middle school age group. Other studies using CDSII or other appropriate instruments with middle school students may provide more information on how to better assess causal attributions in middle grades. Causal attribution research with middle school students is difficult due in part to the methodologies employed for data collection. Bipolar causal dimensions represent a viable

methodology, therefore. more research is needed investigating the use of CDSII with middle school students.

More research is indicated to investigate the confounding of the variables of locus and personal control with middle school students. Implications are that other dimensions may be more suitable for this population.

The fact that personal control and locus seem to measure similar constructs warrant further investigation into the dimensional attributes appropriate for this age group. From a theoretical perspective. this finding supports research findings by Vallerand and Richer (1988) suggesting that causal dimensions may be normally correlated in real-life settings.

The "fundamental researcher error" (Russell, 1992), which has the researcher categorizing literal attributions. may be compounded by the inability of middle school students to clearly articulate causal attributions. Although it is generally accepted that causal reasoning is present in very young children. a consideration for testing this age group may be the fact that children sometimes have difficulty articulating responses to"why" questions. however. children may be able to identify the underlying feeling associated with the positive or negative outcome.

Item analysis of the literal responses of students making open responses can reveal problems areas that need to be studied. While the majority of literal responses were categorized as ability or effort attributions. Numerous negative attitudes were voiced about the reading literacy test. Implications are for future researchers to research dysfunctional attribution processes for middle school students

A significant interaction was found between minority and nonminority and females and males. Future research is indicated to investigate this interaction. Minority males had lower external control scores (others have no control) than minority females. Nonminority males had higher external control scores (others have control) than nonminority females. This interaction warrants further investigation for the purpose of examining school climate perceptions for minority and nonminority males and females.

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APPENDIX A

Causal Dimension Scale

INSTRUCTIONS: Think about the reason or reasons you have written above. The items below concern your impressions or opinions of this cause or causes for your performance. Circle one number for each of the following questions.

Is this cause something:

1. That reflects an aspect of yourself	9 8 7 6 5 4 3 2 1	reflects an aspect of the situation
2. Manageable by you	9 8 7 6 5 4 3 2 1	not manageable by you
3. Permanent	9 8 7 6 5 4 3 2 1	temporary
4.You can regulate	9 8 7 6 5 4 3 2 1	you cannot regulate
5. Over which others have control	9 8 7 6 5 4 3 2 1	over which others have no control
6. Inside of you	9 8 7 6 5 4 3 2 1	outside of you
7. Stable over time	9 8 7 6 5 4 3 2 1	variable over time
8. Under the power of other people	9 8 7 6 5 4 3 2 1	not under the power of other people
9. Something about you	9 8 7 6 5 4 3 2 1	something about others
10. Over which you have power	9 8 7 6 5 4 3 2 1	over which you have no power
11. Unchangeable	9 8 7 6 5 4 3 2 1	changeable
12. Other people can regulate	9 8 7 6 5 4 3 2 1	other people cannot regulate

Note: The total scores for each dimension are obtained by summing the items, as follows: 1,6,9=locus of causality; 5,8,12=external control; 3,7,11=stability; 2,4,10=personal control.

APPENDIX B

INFORMED CONSENT FORM
Elsie M. Daniels, Ph.D. Candidate
Old Dominion University
Norfolk, Virginia

Dear Parent/Guardian:

My name is Elsie Daniels. I am a Ph.D. candidate at Old Dominion University. I am conducting a study that investigates students' feelings about the reading portion of the Literacy Passport Test. The title of the study is **Causal Attribution Differences Between Sixth Grade Urban Middle School Students Who Pass or Fail Reading on the Literacy Passport Test.**

Within a week after the students receive their Literacy Passport reading results, the students will be asked to complete a survey about their reading performance. This survey contains twelve items that will be read to the students by the teacher. The survey can be done during homebase time and should not interfere with regular instructional time.

Your consent is needed in order for your child to participate in this study. Your child will not be identified because names are not put on the surveys. Special care will be given to insure the confidentiality of your child. If for any reason, you prefer that your child not participate in the project, please let me know, and I will make other arrangements for him/her.

Upon completion of this study, copies will be provided to the school division. These copies will be available to you upon request. If you have any questions, please contact me at (757)489-4520. Please sign and return the bottom portion of this consent form to the homebase teacher by Wed. May 14, 1997. Please have your child sign also. Thank you for your consent.

Sincerely,

Elsie M. Daniels

Child's Name_____**Child's Signature**_____
(Please print)

_____My child has permission to participate in this study. My child will respond to a short survey that will be given after the Literacy Passport Test results are returned.

_____My child does not have my permission to complete the survey. Make other arrangements for her/him.

Parent/Guardian's Signature_____**Date**_____

APPENDIX C

END OF SCHOOL SURVEY

CIRCLE THREE WORDS THAT BEST DESCRIBE HOW YOU FEEL ABOUT SCHOOL ENDING.

Excited Glad Happy Worried Anxious Upset Relieved Sad

CIRCLE THE WORD THAT BEST DESCRIBES HOW YOU HAVE FELT MOST OF THE TIME DURING THE YEAR.

Excited Happy Good Angry Worried Afraid Anxious Upset

OVERALL, THIS YEAR HAS BEEN: Great Good Fair Not so good Bad

Circle the words that apply to you.

1. I remember: everything we studied almost everything we have studied some of the things we studied none of the things we studied
2. I got a lot of help from: friends teachers classmates tutors parents
3. Every week, I had to spend: at least 3 hours in the library less than 3 hours in the library no time in the library
4. Every week I studied: every night at least three nights less than three nights never
5. In my classes, I have accomplished: more than I expected just what I had expected less than what I expected very little

Complete the sentences.

6. My favorite subjects are_____
7. The best time of the school day is _____
8. If I could start sixth grade over again, I would _____
9. If I could start sixth grade over again, I would NOT _____
10. In the seventh grade, I want _____
11. If I could change one thing about school, I would _____

_____

12. I will probably spend most of the summer_____

APPENDIX D

Causal Dimension Terminology

Please feel free to define and/or discuss the terms with the students if you feel that it is necessary or the students ask for definitions.

- **Reflects an aspect of - "is a particular something about"**
- **Manageable - to have charge of; can be handled by**
- **Permanent - continuing in the same state without change**
- **Temporary - lasting for a limited time only**
- **Regulate - to control, direct, or govern according to rule, principle or system**
- **Control - power or charge**
- **Power - authority; ability to control or influence; great ability to do**
- **Stable - not easily moved; resisting change; permanent**
- **Variable - likely to change; not steady or fixed; easily moved**
- **Under the power of - "controlled by"**
- **Changeable - can be altered; not constant**
- **Unchangeable - cannot be altered; constant**

APPENDIX E

TO THE TEACHER

This is a causal dimension survey (developed by psychologist Dan Russell) intended to gain insight into the reasons people feel that an outcome is successful or unsuccessful. In this survey, people are asked to consider the main reason they were successful or unsuccessful at something, then rate that reason (on a nine point scale) on locus, stability and controllability.

This survey asks students to think about their performance on the reading portion of the Literacy Passport Test and decide on the most important cause for their performance. The student is asked to write the main cause for the Literacy Passport reading test outcome, then rate this reason on the nine point causal scale. There are no right or wrong answers for the students.

This is a semantic differential scale, so there may be only shades of differences in the meaning of some of the terms. Definitions of the terms are included and may be discussed with or read to the students.

To familiarize the student with using the scale, please read and complete the example with the students.

DIRECTIONS FOR THE TEACHER :
Please have each student circle the appropriate information at the top of the LITERACY PASSPORT READING SURVEY. Then ask the students to write the main reason for their outcome on the reading portion of the LPT. They are only to give the most important reason.

Please stress that this is about the Reading test only.

READ THE TWELVE ITEMS ALOUD TO THE STUDENTS as they complete the survey.

Please collect the sheets and place them in the envelope provided.

DIRECTIONS FOR THE STUDENTS (LITERACY PASSPORT SURVEY):
Circle the information at the top that applies to you.
Now think about your outcome on the reading portion of the Literacy Passport Test. Think about the reading portion only. Write the main reason you passed or did not pass the reading. Only write one reason.

As I read through the rating scale, circle the number that tells how you feel about the reason.

Please use the back of this page to make any comments, suggestions or notes.

APPENDIX F

DIRECTIONS FOR THE STUDENTS - STUDENT EXAMPLE

When things happen, we often wonder about the outcome. For example, if you miss a basketball goal or fail a test, you may think, "Why did I miss that goal?" or "Why did I fail that test?" When we decide on some reasons for the outcome, we further think about whether other people had something to do with it or if it was only something about me.

For this activity, a baseball fan gives a reason for missing a million dollar pitch. Pretend you are the fan and circle the number that most reflects how you feel about the cause. Let's complete the example together.

EXAMPLE

At the start of the World Series game Wednesday night, one fan had a chance to win a million dollars if he pitched a strike. The fan had pitched a perfect strike for the television cameras earlier that afternoon. The fan practiced a lot and really wanted to win the million dollars. When it was time for the contest, the fan pitched the ball and missed throwing a strike. The fan says that the main cause for not pitching a strike was

I was nervous

Now think about the reason he gave and circle the numbers that tell how strongly the fan may have felt about why he failed. The fan was asked to complete this survey about his nervousness.

Is this cause something:

1.	That reflects an aspect of yourself	9 8 7 6 5 4 3 2 1	reflects an aspect of the situation
2.	Manageable by you	9 8 7 6 5 4 3 2 1	not manageable by you
3.	Permanent	9 8 7 6 5 4 3 2 1	temporary
4.	You can regulate	9 8 7 6 5 4 3 2 1	you cannot regulate
5.	Over which others have control	9 8 7 6 5 4 3 2 1	over which others have no control
6.	Inside of you	9 8 7 6 5 4 3 2 1	outside of you
7.	Stable over time	9 8 7 6 5 4 3 2 1	variable over time
8.	Under the power of other people	9 8 7 6 5 4 3 2 1	not under the power of other people
9.	Something about you	9 8 7 6 5 4 3 2 1	something about others
10.	Over which you have power	9 8 7 6 5 4 3 2 1	over which you have no power
11.	Unchangeable	9 8 7 6 5 4 3 2 1	changeable
12.	Other people can regulate	9 8 7 6 5 4 3 2 1	other people cannot regulate

Please collect this example, then continue with the reading survey.

APPENDIX G

STUDENT EXAMPLE RESPONSE SHEET

At the start of the World Series game Wednesday night, one fan had a chance to win a million dollars if he pitched a strike. The fan had pitched a perfect strike for the television cameras earlier that afternoon. The fan practiced a lot and really wanted to win the million dollars. When it was time for the contest, the fan pitched the ball and missed throwing a strike. The fan says that the main cause for not pitching a strike was

I was nervous

Now think about the cause he gave and circle the numbers that tell how strongly the fan may have felt about why he failed. The fan was asked to complete this survey about his nervousness.

Is this cause something:

1.	That reflects an aspect of yourself	9 8 7 6 5 4 3 2 1	reflects an aspect of the situation
2.	Manageable by you	9 8 7 6 5 4 3 2 1	not manageable by you
3.	Permanent	9 8 7 6 5 4 3 2 1	temporary
4.	You can regulate	9 8 7 6 5 4 3 2 1	you cannot regulate
5.	Over which others have control	9 8 7 6 5 4 3 2 1	over which others have no control
6.	Inside of you	9 8 7 6 5 4 3 2 1	outside of you
7.	Stable over time	9 8 7 6 5 4 3 2 1	variable over time
8.	Under the power of other people	9 8 7 6 5 4 3 2 1	not under the power of other people
9.	Something about you	9 8 7 6 5 4 3 2 1	something about others
10.	Over which you have power	9 8 7 6 5 4 3 2 1	over which you have no power
11.	Unchangeable	9 8 7 6 5 4 3 2 1	changeable
12.	Other people can regulate	9 8 7 6 5 4 3 2 1	other people cannot regulate

APPENDIX H

LITERACY PASSPORT READING SURVEY

CIRCLE THE RESPONSE THAT APPLIES TO YOU.

LPT READING OUTCOME: Passed Did Not Pass GENDER: Male Female

RACE: American Indian/Alaskan Native Asian/Pacific Islander Hispanic

Black White Other

If you take this test again in October, do you think you will pass? Yes No

The **main** cause for my outcome on the reading part of the Literacy Passport Test (LPT) is

_____

_____

Now think about the reason you gave and answer the questions below. Circle the number that is closest to how you feel about the reason.

Is this cause something:

1.	That reflects an aspect of yourself	9 8 7 6 5 4 3 2 1	reflects an aspect of the situation
2.	Manageable by you	9 8 7 6 5 4 3 2 1	not manageable by you
3.	Permanent	9 8 7 6 5 4 3 2 1	temporary
4.	You can regulate	9 8 7 6 5 4 3 2 1	you cannot regulate
5.	Over which others have control	9 8 7 6 5 4 3 2 1	over which others have no control
6.	Inside of you	9 8 7 6 5 4 3 2 1	outside of you
7.	Stable over time	9 8 7 6 5 4 3 2 1	variable over time
8.	Under the power of other people	9 8 7 6 5 4 3 2 1	not under the power of other people
9.	Something about you	9 8 7 6 5 4 3 2 1	something about others
10.	Over which you have power	9 8 7 6 5 4 3 2 1	over which you have no power
11.	Unchangeable	9 8 7 6 5 4 3 2 1	changeable
12.	Other people can regulate	9 8 7 6 5 4 3 2 1	other people cannot regulate

APPENDIX I

Reading Survey Directions

You have recently received your Literacy Passport results. We're going to complete this survey about your reading results. This is about reading only. Do not put your name on the paper.

Circle the information at the top that applies to you. If you passed reading, circle **"Passed."**
If you did not pass, circle **"Did Not Pass."**
If you are a boy, circle **"Male."** If you are a girl, circle **"Female."**
Circle your race, **"American Indian/Alaskan Native," "Asian/Pacific Islander," "Hispanic," "Black," "White," or "Other."**
If you take the reading part of the Literacy Passport Test again, do you think you would pass? Circle **"Yes"** or **"No."**

You may have passed the reading because you studied hard or had help. You may have failed because you didn't study or had no help. There may be another main reason for your performance.

Think about the main reason why you passed or did not pass the reading test. Complete the sentence,
"The main cause for my outcome on the reading part of the Literacy Passport Test is _____."

Write only **one** reason. As you complete the survey, think only about the **one** cause you wrote.

As I read through the twelve items, look at the statements at each end of the numbers. Circle the number that best describes how you feel about your reason.

#1 - Does the cause you wrote reflect an aspect of yourself or an aspect of the situation? Aspect of yourself is the same as something about you or something about taking the test. If you feel that it is half about you and half about the situation, circle 5. Circle either 9, 8, 7, or 6 if it is more because of you. Circle either 1, 2, 3, or 4 if it is more because of the situation.

#2 - Manageable by you, not manageable by you? (You can handle it, you cannot handle it)

#3 - Permanent or temporary

#4 - You can regulate, you cannot regulate

#5 - Over which others have control, over which others have no control

#6 - Inside of you, outside of you

#7 - Stable over time, variable over time

#8 - Under the power of other people, not under the power of other people. (Other people are in charge, other people are not in charge)

#9 - Something about you, something about others

#10 - Over which you have power, over which you have no power. (You are in charge, you are not in charge)

#11 - Unchangeable, changeable

#12 - Other people can regulate, other people cannot regulate

APPENDIX J

Elsie M. Daniels, Ph.D. Candidate
Old Dominion University
Norfolk, Virginia
Telephone: (757)489-4520

Dear Teachers:

My name is Elsie Daniels. I am a Ph.D. candidate at Old Dominion University. I am conducting a study that investigates students' feelings about the reading portion of the Literacy Passport Test. The title of the study is **Causal Attribution Differences Between Sixth Grade Urban Middle School Students Who Pass or Fail Reading on the Literacy Passport Test.**

Within a week after the students receive their Literacy Passport reading results, the students will be asked to complete a survey about their reading performance. This survey contains twelve items that I would like for you to read to the students. The survey can be done during homebase time and should not interfere with regular instructional time.

Your help is needed to complete the study. Below is a schedule of the proposed dates for distributing the consent forms and administering the survey. Please call me if you have questions or need assistance with administering the survey. **I will collect the surveys as soon as they are completed.** Thank you for your help.

SURVEY SCHEDULE

May 8, 1997	**Meet with teachers to explain the study. Distribute the INFORMED CONSENT FORMS, and STUDENT EXAMPLE RESPONSE SHEETS to the teachers**
May 14, 1997	**Researcher will collect Informed Consent Forms from the teachers**
May 14- 30, 1997	**Student example may be used with students (optional)**
June 2, 1997	**Deliver the LITERACY PASSPORT READING SURVEYS to the teachers**
June 2-6, 1997	**Administer the LITERACY PASSPORT READING SURVEY. The exact date depends on the date the test results are returned to the students.**

APPENDIX K

OLD DOMINION UNIVERSITY

Darden College of Education
Department of Educational Curriculum and Instruction
Norfolk, Virginia 23529-0161
Phone: (804) 683-3283
FAX: (804) 683-5862

January 13, 1997

4004 Bowden's Ferry Road #3
Norfolk, VA 23508
Phone (757)489-4520

Dr. Dan Russell
2631 Ridgetop Road
Ames, Iowa 50014

Dear Dr. Russell:

I am a graduate student completing my dissertation at Old Dominion University. I am researching the causal ascriptions and dimensions of sixth-grade students required to pass the Virginia Literacy Passport Test before graduating from high school.

After examining several instruments, I have decided that I would like to use the Causal Dimension Scale II with my subjects. This letter is to request your permission to use the test in my study.

Thank you for sending me a copy of the article last year. Thank you for permission to use the test in my study.

Sincerely,

Elsie M. Daniels
Ph.D. Candidate

APPENDIX L

IOWA STATE UNIVERSITY

Center for Family Research in Rural Mental Health
Social and Behavioral Research Center for Rural Health

2625 North Loop Drive, Suite 500
Ames, Iowa 50010-8296
515 294-4518
FAX 515 294-3613

January 17, 1997

Elsie M. Daniels
4004 Bowden's Ferry Road #3
Norfolk, VA
23508

Dear Ms. Daniels:

You have my permission to use the Causal Dimension Scale II in your doctoral dissertation. My one request is that you send me a summary of your findings once you have completed your dissertation. Please feel free to give me a call or send me an E-mail message (my address is drussell@iastate.edu) if you have any questions regarding use of the measure.

Good luck with your research.

Sincerely,

Daniel W. Russell

Daniel W. Russell, Ph.D.
Professor

APPENDIX M

ELSIE M. DANIELS

4004 Bowden's Ferry Road #3
Norfolk, VA 23508

January 22, 1997

Dr. Daniel W. Russell
2631 Ridgetop Road
Ames, Iowa 50014

Dear Dr. Russell:

Thank you for your permission to use the Causal Dimension Scale II in my research study. I will send you a summary of my findings. My anticipated date of completion is August, 1997.

I really appreciate the support you have given, and I will call if I have questions.

Sincerely,

Elsie M. Daniels, Ph.D. Candidate

Old Dominion University

APPENDIX N

Research Request
Submitted to Hampton City Schools by
Elsie M. Daniels, Ph.D. Candidate
Old Dominion University
December 1996

1. State the relevance of the proposed research to the adopted goals of Hampton City Schools. Be specific as to which division objectives relate to the research.

I intend, with my proposed research, to investigate the success and failure attributions of sixth grade students who take the reading part of the Literacy Passport Test (LPT). This relates to the goal of improving literacy. The information learned from studying the students' causal attributions will be useful in designing curricula that address the academic and motivational needs of children.

2. Target population of the study. Be specific as to grade level involved, number of students, member of staff, school(s) selected. State procedure(s) used to select groups listed above.

Target population: All sixth grade students at Spratley and Eaton Middle schools not is self-contained academically challenged classes.

Number of staff: All sixth grade core teachers at Spratley and Eaton will need to administer the CDSII. The CDSII is to be administered to all students. A sample will selected from the responses of students at both schools.

3. When will study be conducted? List dates, times, etc. Be sure to state if it will be done during daily instructional time and which specific classes and subjects will be involved.

Within one week after sixth grade students take the Literacy Passport Test and within one week after they are notified of the LPT results (estimated times March, 1997 and June 1997).

Time - Between 8:45 and 10 AM during daily instructional or home base time.

4. State amount(s) of time the study will require of staff, students, etc.

Approximately 30 minutes or less is required to demonstrate to the teachers how to administer the scale. Any additional time would be spent answering any questions the teachers may have. Approximately 30 minutes is required of the students to complete the scale.

5. Specify what each staff member (by name) will be asked to accomplish during the study.

The teachers will be asked use an overhead to read, explain and complete a sample scale with the students. Then the teacher will read the scale to the students as the students individually write one attribution and circle their responses.

6. Provide copies of all letters, permission slips, and correspondence where needed to secure right to test, interview, study or analyze school records or students. How will they be distributed and by whom? How will they be returned.

The teachers will be asked to distribute and collect consent forms prior to the administration of the Literacy Passport Test in February or March. If a student does not return a form to the teacher, the researcher will followup. The students' response sheets will be assigned codes for the first and second administration. The students are not identified by name. No student records or student interviews are necessary. Students are asked to indicate school, race, LPT reading results (passed or failed), and gender. Space is av The teachers will be provided copies of the scale, student codes, a transparency for the example, and directions for administering the scale. The researcher will collect the CDSII responses from the teachers.

7. Specify all instruments to be used in study. Name of test, type, publisher, date, etc.

The instrument to be used is the Revised Causal Dimension Scale (CDSII) devised by Dan Russell (1982), Department of Psychology, Iowa State University. The students are asked to make an open-ended causal attribution for their performance on the reading part of the LPT and then code that attribution on the CDSII.

8. List any and all costs factors involved and source of any funds to be used.

There is no cost involved for Hampton City Schools. The costs for copies, transparencies and data analysis are paid by the researcher.

9. Specify any persons involved other than HCS employees. Give names, qualification; college and grade level of college students.

Personnel involved other than Hampton City School employees are:

Dr. Jane M. Hager	Dr. Jack Robinson	Dr. Patricia Fisher
Associate Dean, ODU	Associate Professor	Director of Instruction
Dissertation Chair	ODU	Portsmouth City Schools

10. Who will receive copies of the study?

A copy of the study will by given to Hampton City Schools' Research Committee. Old Dominion University will have copies.

11. Give the names, grades, subjects, and school(s) of all HCS employees whom you plan to involve. Written consent to participate will be required from each of these employees prior to the final approval of the research project.

Sixth grade core teachers at Spratley Middle School and Eaton Middle School will be asked to administer the CDSII.

12. Two copies of any research approved must be forwarded to the Research Committee.

Two copies will be forwarded to HCS Research Committee

13. If the study is to be done in collaboration with a college or university or if it is part of the requirements for a course or degree, approval from the faculty member involved is required.

The study is done in collaboration with Old Dominion University in completion of requirements for a doctoral dissertation. The Dissertation Committee Chairperson is Dr. Jane M. Hager.

M E M O R A N D U M

DATE: January 16, 1997

TO: Hampton City Schools Research Committee

FROM: *Elsie M. Daniels (489-4520)*

RE: Research Request

CC: Dr. Dwayne Harrell, Dr. Joann Fama, Ken Gray
Juanita Joyce, Joseph Sanzo, Joyce Weeks

Dr. Harrell informed me that my research proposal was not approved because of the amount of instructional time required. I wish to request approval with the following changes:

The survey will be administered only **once** after the students receive the results back in May or June. The survey will not be administered after the administration of the test in February and after receiving results in May. This is during the last few weeks of school.

The estimated thirty minutes is not required for the administration of the survey. The survey consists of twelve statements that the teacher reads to the students. The students respond (circle a number) as the statements are read to them. I have contacted the teachers who administered the survey for the pilot study. They informed me that actual administration time was about ten minutes. The time will be further shortened by including a copy of the example for each student instead of putting the sample on the overhead projector. This survey can be administered during the scheduled home base time and not involve any instructional time.

Complete written directions will be given to the teachers, eliminating the need to meet with them. However, I will be available to meet with the teachers at their request.

The students will not be required to sign their names or identify themselves in any way. Confidentially is not threatened in any way.

I will be responsible for distributing and collecting all permission forms.

Please reconsider approving my research request with the above changes. I am very interested in investigating the students' perspectives about their performance on the Literacy Passport Test.

APPENDIX O

REGISTRATION OF RESEARCH INVOLVING HUMAN SUBJECTS

TWO URBAN MIDDLE SCHOOLS
STATE OF VIRGINIA

1. **Principal investigator:**

Elsie M. Daniels
4004 Bowden's Ferry Road
Apartment 3
Norfolk, Virginia 23508
Home Telephone (757)489-4520

2. **Name and address of each co-investigator:** None

3. **Title of Research Project:** Causal attribution differences between sixth grade urban middle school students who pass and students who fail the reading part of the Virginia Literacy Passport Test.

4. **Document Submission Date:** December 3, 1996

5. **Research Will be Conducted:** February 1, 1997 - June 15, 1997

6. **Type of Research:** Doctoral Dissertation

7. **Purpose of Study:** The purpose of the proposed research is to compare the causal attributions and causal dimensions of sixth grade students who take the reading portion of the Literacy Passport Test, which is administered to sixth graders in the school district.

8. **Independent Variables in the Study:** Causal attributions of the students

9. **Dependent Variables in the Study:** Causal dimensions of the students

10. **Subject Population (Gender, Age, Characteristics):** The subjects for this study are male and female sixth grade students enrolled in public middle schools in the district. The students range in age from ten to twelve years old. The students are not enrolled in self-contained academically challenged classes. The classes are grouped in heterogeneous, multicultural and diverse groups of approximately twenty five students per class.

11. **Why are you using these human subjects?** Sixth graders in the state of Virginia are required to pass the Literacy Passport Test prior to entering high school. The test is administered for the first time to sixth graders. Intervention strategies will not influence the results.

12. **What is your sample size?** There are approximately two hundred and seventy five sixth graders in each school. Data will be collected from all participating students present.

13. **Location Where Research Will be Conducted:** The proposed research will be conducted at two middle schools in Hampton, Virginia pending district approval.

14. **Who specifically will gather the data, and what training will they require?** The sixth grade teachers will gather the data. They will be trained in a one hour training session prior to the day they actually collect data from the students.

15. **What specifically will be required of the subjects in this study?** The subjects will be asked to circle responses on a twelve item causal dimension scale. This causal dimension scale is a nine point Likert-type questionnaire regarding the students' feelings about their performance on the Literacy Passport Test. See attached copy of Russell's Causal Dimension Scale II

16. **Proposed Benefits of Study:** The Literacy Passport Test represents a significant assessment of the students' reading ability and the schools' curricula in reading instruction. The study relates directly to the educational goals of improving literacy. The information learned from studying the students' causal attributions will be useful in designing curricula and intervention strategies that address the
academic and motivational needs of students.

17. **Benefits to Research Subjects:** While the research will not benefit the current subjects, the results will prove beneficial to future students who have to pass the Literacy Passport Test. Students who fail the reading test in the sixth grade will benefit from the results of the study.

18. **Potential Risks to Subjects Associated with Conduct of Study:** No risk factors are involved for the subjects. Confidentiality of the subjects will be protected.

19. **Risk: Benefit Ratio:** None

20. **Informed Consent Procedures:** Parents and guardians of the students will be contacted requesting permission for their child/children to participate.

See attached letter of consent

Signatures:

Principal Investigator	**Date**
Chair, Doctoral Committee	**Date**
Chair, FGO Research & Scholarship Committee	**Date**
University Research Administrator	**Date**

MEMORANDUM
ADDENDUM TO REGISTRATION OF RESEARCH INVOLVING HUMAN SUBJECTS SUBMITTED BY ELSIE M. DANIELS, DECEMBER, 1996

TO: Dr. Derlega, Old Dominion University
Dr. Robert Ashe, Old Dominion University

FROM: Elsie M. Daniels, Ph.D. Candidate

DATE: December 18, 1996

REF: Registration of Research Involving Human Subjects

As discussed on the phone, I am providing additional information about my initial request for human subjects research.

The instrument will be revised to read as follows:
The reason for my performance on the test is_____

_____

Based on prior work with the instrument, students understand the instrument when an example is modeled, and the instrument is read to them. Use of the instrument with a middle school population is a part of the research study.

Item 17 **Benefits to Research Subjects**
I will return to the schools and give the students feedback on how attributions influence their performance.

A signature line for the student will be added to the consent form.

VITA

Elsie Perry Daniels, completed the requirements for a Doctor of Philosophy degree in Urban Services with a concentration in Education, dual cognates in Human Resource Development and Higher Education, and Certification in Education Administration. She has professional training and/or experience in Education, Special Education, Reading, Human Resource Development, and Higher Education. Her current certifications include Postgraduate Professional License (Virginia) in Administration (k-12), Special Education. Reading, and Mental Retardation NK-12. In the state of South Carolina (1978-1999), she is certified as a Reading Consultant, Learning Disabilities, Special Education and Psychology teacher. In the state of South Carolina, she is endorsed as an Assessment of Performance in Teaching (APT) observer and Teacher Incentive Program (TIP) evaluator.

For the past twenty-two years, Elsie Daniels has served in teaching and supervisory positions in public schools in South Carolina and Virginia. As an educator, she has taught special education, reading and has served as reading facilitator. In the community and church, she is involved in tutoring and extracurricular youth athletic programs.

More information about this study can be obtained by contacting the author at the address below.

Elsie Perry Daniels

620 Childs Avenue

Hampton, Virginia 23661