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A Study of The Relationship Between Locus of Control, Behavior and Academic
Achievement in 5th Grade Students

by
Dawn Zuber

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree
of
The Graduate School
at
Rowan University
May 9, 2000

Approved by _____
Professor

Date Approved 5-9-00

ABSTRACT

Dawn M. Zuber

A Study of the Relationship Between Locus of Control, Behavior and Academic
Achievement in 5th Grade Students

2000

Dr. Dihoff

Seminar in School Psychology

This study attempted to investigate the relationship between locus of control, academic achievement and behavior in 5th grade students. It was hypothesized that locus of control would be more internalized with high academic achievement and less behavior problems. A total of 40 subjects participated. Data was collected using the Nowicki-Strickland Locus of Control Scale, the Devereux Behavior Scale- School Form and the Metropolitan Achievement Test. Using this data, a relationship was measured using the Pearson Product-Moment Correlation Coefficient (r). The results demonstrated significant correlations between all of the variables. The results were interpreted to mean that 5th grade students with an internal locus of control or perceived sense of control have greater academic achievement and exhibit less behavior problems.

Mini-Abstract

Dawn M. Zuber

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This study attempted to investigate a relationship between locus of control, behavior and academic achievement. It was hypothesized that locus of control would be more internalized with high academic achievement and less aggressive behavior. Significant relationships were found. A perceived sense of control is related to academic achievement and behavior.

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Chapter One

Need

In the field of education, the idea of motivation and locus of control is an important arena to be investigated. As educators it is pertinent to be aware of students' tendencies towards internal or external control. Awareness allows for a better understanding of the needs of our students.

Working in a classroom requires a teacher to do so much more than teach. Before teaching can be effective, a teacher must ensure that her students are prepared to learn. This is quite a challenge in today's society. Classrooms can often be composed of children with extreme differences in ability, as well as, behavior problems that are constant obstacles.

This study will focus on school-age children. Our classrooms are filled with children from diverse backgrounds. These backgrounds consist of differences in socio-economic status, race, family structure, academic ability, etc. Consequently, there is not a single method for molding our children for success in school. However, we must continue to strive to meet this challenge.

Becoming more aware of internal and external beliefs will assist in meeting this challenge. Furthermore, it may provide an educator with insight regarding how to approach certain students to evoke cooperative responses; how to build trust with students that fosters growth; and various means of motivating students with different needs. The ultimate goal is for our children to feel as though they can succeed in school and aspire to become a lifelong learner.

In a classroom, one can never be armed with too much knowledge or insight. Furthermore, we must face the changes occurring in our society and effecting our children if we are going to meet their needs. As educators we must model a constant quest for knowledge that empowers us to be our best.

Purpose

The purpose of this study is to investigate the relationship between locus of control and the variables of academic achievement and aggressive behavior in fifth grade students. Approximately 40 students from an upper elementary school, in a community considered both rural and urban, will participate in the study with the goal of gaining a better understanding of the needs of our children.

Hypothesis

The hypotheses examined in this study are:

1. Locus of control will be more internalized with high academic achievement in 5th grade students.
2. Locus of control will be more internalized with 5th grade students who exhibit less aggressive behavior.

Theory

There are existing theories that support this study. One is the social learning theory. The social learning theory is broad and encompasses many ideas, but basically suggests that rewarded behavior leads to the expectancy that the same behavior will produce rewards in the future. (Pettijohn, 1997).

This leads to Julian Rotter's idea of locus of control. Rotter focuses on two types of control: internal and external. It is believed that people think about their past experiences when faced with a new situation and it is those experiences that judge their chances for an outcome that is desirable. (as cited in Carver & Scheier, 1996). A person who views the past experiences as a result of their own actions are termed internals. A person who views past experiences as a result of chance or circumstance is termed external.

Whether a person is internal or external has a great impact on the learning experience of that person. Consequently, a person's perception of the control they possess over producing success or failure results in behavior displayed and achievement attained in the classroom. Does a student believe they can achieve success from their own actions or do they believe they cannot manipulate the power of their environment and their successes and/or failures occur by chance? Does this lack of control feeling lead to aggression and lower academic performance?

When discussing the social learning theory and aggression, one must explore the ideas of Bandura. Bandura believed that all behavior is learned through imitation and modeling. In addition, the social feedback one receives helps shape behavior. The

experience of social success leads to the elevation of self-esteem and social expectancies. Failure and negative feedback leads to lower self-esteem. (Snyder, 1995).

Classroom disruption may be a desperate search for success and respect by young people who have few opportunities. Moreover, one's experience may fail to meet the expectations of a classroom and acting out is a means of expressing this frustration.

Definitions

External locus of control

Those termed externals view reinforcers as controlled by something other than their own actions. (Carver& Scheier, 1996).

Internal locus of control

Those termed internal view reinforcers as being controlled by their own actions. (Carver& Scheier, 1996).

Aggression

Will refer to those behaviors that have negative effects on the educational process.

Expectancy

A judgment about how likely a specific behavior is to produce a positive outcome. (Carver& Scheier, 1996).

Reinforcers

An event that strengthens the behavior that came before it. (Carver & Scheier, 1996).

Assumptions

This study assumes that the teachers completing observational reports will do so with fairness and integrity. It, also, assumes that the students completing self-reports will do so with integrity. Another assumption of this study is that the sample tested are representative of the entire fifth grade population.

Limitations

One main limitation of this study is that it will not address causality. It will examine one's tendency toward internal or external control, but will not address the causes that lead to the development of that tendency.

Overview

This paper will be an investigation into the relationships between locus of control, aggression and academic performance as proposed in the hypotheses. In Chapter 2 pertinent literature supporting this research will be reviewed. In Chapter 3 a presentation of the research design used in this study will be provided including information on the subjects used and the instruments utilized for measuring locus of

control, aggression and academic achievement. In Chapter 4 an in depth analysis of the results will be displayed. Chapter 5 will be a summary and conclusion.

Chapter Two

Review of Literature

This chapter is a review of the literature and pertinent research that apply to the present study. The first section encompasses information regarding the influence of locus of control on academic achievement. The next section explores various relationships between locus of control and aggression. The third section explores the attribution theory and its relation to locus of control. At the conclusion of these sections is a brief summary highlighting the major points of this chapter.

The Nowicki - Strickland Locus of Control Scale

It is important to include a review of the following study because much research has used the Nowicki-Strickland Scale as the primary instrument for measuring locus of control.

Nowicki and Strickland(1973) conducted a study to produce a precise and reliable measure of locus of control. An investigation of the Nowicki -S trickland Scale was explored to determine its appropriateness for assessment. It was hypothesized that 1. Scores will become more internal with the increase of age; 2. Scores will demonstrate that internals achieve more than externals and 3. Scores will not be related to intelligence or social desirability.

The discussion of results includes some highlights. Locus of control scores were not significantly related to social desirability. For males, it was tentatively

concluded that an internal locus of control was related to higher occupational level. Also, for males, a definite relationship existed between locus of control and achievement scores. However, for females, the Nowicki-Strickland scale does not appear to be a predictor of achievement.

This research broadly supports that scores on the Nowicki-Strickland scale, particularly for males, are significantly related to academic competence, social maturity and independent, self-motivated behavior.

Locus of Control and Academic Achievement

In a study conducted by Jeffrey Landine and John Stewart (1998), the relationship between metacognition, academic achievement, motivation, and locus of control and self-efficacy were investigated. It was hypothesized that there would be a significant positive correlation between these variables and academic average.

The subjects in this study consisted of 108 volunteer high school students aged 17-19 years from the New Brunswick area. The students completed a battery of five questionnaires as well as revealing their most recent report card and academic average.

The results indicate that the variables, including locus of control, were all significantly correlated with academic average.

“Because individuals with an external locus of control do not expect their efforts to result necessarily in reward, they are less effective than those with an internal

locus of control in using environmental information and feedback in problem- solving situations.” (DuCette & Wolk, 1973).

This relationship between locus of control and problem solving was examined in a study designed by Brannigan, Hauk, and Guay (1991). It specifically examined cognitive behavior of people with an internal or external locus of control. It was hypothesized that those with an internal locus of control would engage in daydreaming behavior that was achievement and problem solving oriented. On the contrary, those with an external locus of control would engage in daydreaming behavior that was less productive.

The 200 subjects were aged 18-22 years, were predominantly white and were enrolled in introductory psychology classes at the State University of New York. The results found individuals with an internal locus of control engaged in more achievement oriented daydreams than those with an external locus of control. Also, individuals with an external locus of control engaged in more fear of failure daydreams than those with an internal locus of control. Thus, supporting the view that individuals with an internal locus of control are more achievement oriented.

When looking at locus of control for the purpose of enhancing academic success, it is important to include various populations. “One factor linked to academic achievement of at-risk students is locus of control, a generalized expectancy pertaining to the connection between personal characteristics and/or actions and experienced outcomes.”(Lefcourt, 1991).

In this specific study, their teachers identified 42 black male students between the ages of 11-16 years in grades 7-8 as at-risk. On the average, these students

scored below their class average on standardized tests. The relationships investigated were locus of control, self-esteem and parental verbal interaction.

The instruments used were the Nowicki-Strickland scale to measure locus of control, the Coopersmith Self-Esteem Inventory and the Verbal Interaction Questionnaire.

Locus of control and self-esteem were strongly related in the case of these at-risk black males. Those who assumed more responsibility for what happens in their lives tend to feel better about themselves. Those who believe that events in their lives happen by chance tend to feel worse about themselves. Furthermore, the Stipek & Weisz (1981) review found that students who believe they have control over what happens to them make better grades and score higher on standardized tests. In addition, those with an external locus of control have been characterized by low persistence and low levels of aspiration in academic, occupational and cognitive areas. (DuCette & Wolk, 1973).

Payne and Payne (1989) investigated locus of control and achievement of at-risk elementary students. They were searching for explanations of why at-risk learners do not perform up to their potential and look for solutions to aid these students in succeeding academically.

The foundation of this investigation is based on achievement behavior theories encompassing the causes of success or failure. It has been found that achievers ascribe their success to their own abilities and their failure to lack of effort, which increases the probability of attempting a failed task again. Underachievers ascribe their success to luck and their failure to lack of ability, which decreases probability of attempting a failed task again.

The subjects that participated in the study were an entire population of a lower middle-class elementary school in the southeast, which included 643 students. His or her teacher identified 266 as at-risk representing 41% of the population. The teachers identified these at-risk students from a seven-category list of variables ranging from cognitive deficiencies to emotional and physical problems. Locus of control was measured using the Nowicki-Strickland locus of control scale.

A significant effect was noted between the locus of control mean of at-risk and not at-risk students. At-risk students demonstrated a greater tendency for ascribing their achievement and life experiences to external forces. Thus, being at-risk was correlated with locus of control and poor school performance. No significant results were found for race or sex.

In a study exploring cooperative and competitive strategies and locus of control, David Lester (1992) found that students who have stronger beliefs in an internal locus of control are more motivated to achieve success by both competitive and cooperative strategies. On the other hand, students with a stronger belief in an external locus of control are more motivated to avoid success.

A relationship with locus of control and achievement in educationally handicapped children was investigated by Lyndall Rich (1981). Educationally handicapped children classified as internal and external completed both high and low level questions from a commercial reading series. Generally, it is believed that externals will answer low-level, concrete questions and high-level questions with elaborate cognitive processes will be answered by internals.

56 children in grades 3-6 were given time every day for 25 days to read silently. The material was on their reading level and then they would respond to multiple choice questions.

There was no significant difference found between locus of control and low-level questions. However, internally controlled children performed significantly better than external children on high-level questions.

Research supports that a child's self-orientation of effort and ability result in better adaptation and adjustment in school settings. (Graham, 1991). Also, a distinction between self-oriented causes such as effort and ability and non-self oriented causes such as luck and environment is pertinent when examining the influences of school success. (Boggiano & Katz, 1991). Finally, achievement motivation emerges from one's positive views regarding their self, effort and control expectancy beliefs. (Heckhausen, 1984).

Locus of Control and Aggression

Locus of control is a cognitive process that may be related to aggressive behavior. Beliefs about the ability to control one's environment may affect the degree of frustration that children experience and/or express. (Halloran, Dumas, John, & Margolin, 1999).

According to the research of Romi and Itskowitz (1990), aggression is defined as behavior intended to harm a certain object or person without considering the

consequences. Positive aggression was described as assertive behavior that is constructive in nature. They also describe aggression as being explained by three basic theoretical approaches. 1. The psychobiological theory which is the instinctive basis of aggression. 2. The theory of learned drive, which views a reciprocal relationship between aggression and frustration. 3. The learning theory which considers aggression a learned habit.

In a study completed by Romi and Itskowitz (1990), the relationship between the variables of locus of control and aggression were examined. It was hypothesized that subjects with an internal locus of control would respond to frustration with positive aggression and subjects with an external locus of control would respond more frequently to frustration with negative aggression.

The participating subjects were 460 children from 20 seventh grade classes in Israel. The children were given a locus of control inventory, an intelligence test, a problem-solving task intended to frustrate and an aggression type test that was constructed for the purpose of this test. The aggression type test was a projective picture test. The picture portrayed frustration situations of a figure making an aggressive statement. The subject had to choose a response from four choices.

The results showed subjects with an internal locus of control responded to frustration with positive aggression significantly more than subjects with an external locus of control.

The relationship between aggression and locus of control were discussed in this study. "It seems that subjects having an internal locus of control consider events happening to them as being within their control, and are, therefore, able to respond

accordingly. When the situation is frustrating and requires aggressive behavior, they respond aggressively. They are capable of implementing harm and destruction, yet their responses are relevant to the situation and the results are constructive. By way of contrast, externals who consider events happening to them beyond their control will respond to the same situations in an impulsive, rather than reflective manner.”(Romi & Itskowitz, 1990).

“The extent to which frustrating events increase arousal is a function of the extent to which such events are perceived as controllable.” (Donnerstein & Wilson, 1976; Glass & Singer, 1972). One’s ability to control outcomes may influence the intensity of frustration and aggression.

Bhatia and Golin (1978) tested the hypothesis that externals exhibit greater aggression in response to frustration than internals. The results showed that expectancies about one’s ability to control outcomes influences aggression. It was found that the less the believed control, the greater the aggression.

Osterman, Bjorkqvist, Lagerspetz, Charpentier, Caprara and Pastorelli (1999) found that previous research supports a correlation between external locus of control and behaviors such as conduct disorder, psychological maladjustment, job pressure, depression and anxiety and suicidal tendencies. Contrastly, it was supported that an internal locus of control predicts psychological well-being and good self-esteem.

Using this as a springboard, a study was conducted relating locus of control to 3 types of aggressive behavior, including physical, verbal and indirect. 722 Finnish and Italian children participated. There were 358 girls and 364 boys from 2 age groups of 11 and 15 years.

The Direct and Indirect Aggression Scales were used to measure aggressive behavior. The scales consist of three subscales: direct physical aggression, direct verbal aggression and indirect aggression and are based on peer estimations. 10 selected items from the Nowicki-Strickalnd scale were used to measure locus of control.

The results found internal locus of control to be significantly higher at age 15 than at age 11. Internal locus of control was higher for girls. A correlation between external locus of control and aggression was significant for boys, but insignificant for girls. Also, it was tested whether correlations existed between external locus of control and the three types of aggression. The test indicated that external locus of control correlated weaker with indirect aggression than with physical aggression and there was no significance found between verbal and indirect aggression.

Young's study (1992) is based on the idea that individuals with a sense of mastery or control over life may be less likely to perceive human aggression as instinctual than those who feel life is the result of factors beyond one's control.

Young's study examined attitudes of aggression and their relationship to locus of control. The subjects consisted of 116 undergraduate students who responded to an aggression questionnaire and completed a locus of control scale. A negative correlation was found with the number of misconceptions about human aggression and internal locus of control. Thus, indicating that as internal locus of control increased the number of misconceptions about human aggression decreased. Hence, suggesting that locus of control is associated with attitudes about human aggression.

Sadowski and Wenzel (1982) hypothesized that individuals with an external locus of control would report greater hostility and aggression than those with an

internal locus of control. This was based on William and Vantress's study supporting the idea that powerlessness as viewed by one with an external orientation contributes to hostility and aggression. (1969). The results of this study found a strong relationship between hostility and locus of control.

Todd Morton (1997) conducted a study to examine a correlation between parental locus of control and children's perceptions of control. The results indicated that some aspects of an external parental locus of control are correlated with greater child behavior problems. This supports earlier research of Roberts, Joe and Rowe-Hallbert(1992) which found a significant positive correlation between child coercive behavior and parent external locus of control.

Attribution Theory as Related to Locus of Control

The attribution theory sheds light into understanding human motivation. It reinforces the idea that those who experience frequent success often attribute their success to effort and ability. Those who experience frequent failure often attribute the failure to bad luck or task difficulty.(Weiner,1990).

Fondacaro & Heller (1990) based their study on the rationale that attributing blame to others in threatening situations may allow one to enhance a sense of control and efficacy. These placements of blame fuels anger and results in retaliatory responses.

The participants in Fondacaro & Heller's(1990) study were 54 adolescent boys that consisted of 36 juvenile offenders and 18 nonoffenders. The boys were aged

14-17. The study was structured in an interview style and measured coping abilities of specific personal and interpersonal problem situations, causal attribution scales that indicated why they thought the problem happened and a behavior checklist to measure frequently occurring behavior in childhood and adolescence.

A correlation analyses indicated an association between aggressive behavior and other –blame attributions of offenders. Thus, they have a tendency to externalize blame. This could be characteristic of court involved youngsters, however, an insight was gained. It is assumed that these youngsters were deficient in skills necessary to generate nonaggressive response strategies because of biased perceptions and distorted social cues.

“Adolescents who can construe ambiguous situations from alternative perspectives may be less likely to respond impulsively to these situations on the basis of a single and perhaps biased perception.”(Fondacaro & Heller, 1990).

DeMello and Imms (1999) explored the relationship between self-esteem, locus of control and coping styles in adolescents and their relationship to school attitudes.

The hypotheses tested were 1. There would be a significant positive relationship between high self-esteem, internal locus of control and productive coping styles and 2. Attitudes and perceived performance would be more positive for those with high self-esteem, internal locus of control and productive coping styles.

The participants included 146 adolescents, composed of 90 girls and 56 boys, from a suburban secondary school. The mean age was 15.7 years. The instruments used were the Eighteen Item Self Esteem Scale to measure self esteem and the Nowicki-Strickalnd scale to measure locus of control and coping styles was measured with the 18

item Adolescent Coping Scale. In addition, the subjects responded to two separate items created by the researcher related to attitudes towards school and perception of school performance.

The results indicate significant correlations between these variables. First, the higher one's self-esteem the lower the uses of a non-productive coping style. Secondly, an external locus of control was positively correlated with the use of a non-productive coping style. Also, these variables significantly predicted how well the students perceive their academic performance. Those with a high self-esteem, an internal locus of control and users of a productive coping style were more likely to enjoy school and have positive, academic perceptions.

Weiner, Graham and Chandler(1982) found that anger is experienced when one individual holds another individual responsible for harmful consequences of a social occurrence. Consequently, attributing blame may serve as a defensive coping strategy that fuels anger and increases the likelihood of aggressive responses.

In reference to classroom success, research clearly demonstrates that when a person attributes success to their own effort, they are more likely to put forth greater effort in the future, and persist for longer periods of time. For children with repeated failures, teaching learning strategies alone may not be enough to increase effort and persistence because the child's attributional state often determines the effectiveness of the strategy.

The idea of self-talk, as explored by Corral and Antia(1997) or engaging in positive statements about one's self is meant to meet the objective of attribution reshaping. Often students expect failure and develop a sense of helplessness. By

reshaping attributions through positive self statements and combining learning strategies one may be encouraged to reflect, set goals and self-monitor. This could gradually change one's perceptions about their ability to deal with challenge, and ultimately one could gain control over their own learning by finding a connection between effort and success.

Summary

There is a great amount of research surrounding the variables being explored in the present research study. Overall, locus of control has been linked to both academic average and aggressive behavior. Furthermore, the influence of locus of control on these two variables appears significant.

Throughout the research, the following ideas have been consistent. Individuals with an internal orientation feel a sense of control over their lives, which contributes to enhancing one's academic success and social behavior. On the contrary, individuals with an external orientation feel a lack of control over their lives and often acquire feelings of helplessness and powerlessness. These emotions may hinder effort, thus, effecting academic achievement, as well as, arousing anger in social settings.

Chapter Three

Design of Study

Subjects

The subjects used for this study were selected from a diverse upper elementary school. This elementary school is one of six schools in a community that is considered both rural and urban. Students from two fifth grade regular, education classrooms were selected to participate in this study.

There were a total of 40 subjects including 21 females and 19 males.

Measure

The Nowicki-Strickland Locus of Control Scale

The three instruments used in this study were the Nowicki-Strickland Locus of Control Scale, The Devereux Behavior Rating Scale and the Metropolitan Achievement Test.

The development of the Nowicki-Strickland Locus of Control Scale was prompted by the large body of research expanding on Rotter's locus of control theory and supporting the idea that locus of control is a significant variable in influencing children's behavior and achievement in school.(Nowicki & Strickland, 1973). The major purpose was to create a reliable measure of locus of control that could be administered to a wide range of children.

This scale is a paper-and-pencil measure consisting of 40 questions that require a yes or no answer. Each item describes a situation encompassing interpersonal and motivational areas, which is answered by placing a mark in the yes or no blank. The items are readable at the 5th grade level and appropriate for older children as well.

A high score on the Nowicki-Strickland Scale indicates externality. Nowicki and Strickland have reported reliability coefficients that range from .68 to .81. Furthermore, it was indicated that construct validity has been established through significantly high correlations between this scale and other measures such as Rotter's I-E scale. A number of studies across a diverse range of populations have been completed and support the utility and validity of this instrument.

The reading level of this scale is practical for the present study because younger students can respond appropriately to the items.

The Devereux Behavior Rating Scale-School Form

The Devereux Behavior Rating Scale-School Form is an instrument used to assess behaviors that are associated with emotional disturbances. This scale is appropriate for evaluating the behavior of children and adolescents aged 5-18. The person who completes the form must qualify as someone who has a familiarity of the child's behavior for the past 4 weeks because the score obtained is a function of the number of times specific behaviors have been noted.

The Devereux is organized into four subscales to maximize its usefulness and better identify problem areas. There are 40 questions. 10 items are organized into 4

subtests. 1. Interpersonal problems (IP) which are described as the inability to develop or maintain interpersonal relationships with peers and teachers. 2. Inappropriate behaviors/feelings (IBF) which is described as exhibiting inappropriate behaviors or feelings under normal circumstances. 3. Depression (D) which is described as exhibiting a general pervasive mood of unhappiness or depression. 4. Physical symptoms/fears (PSF) which is described as the developing of physical conditions or fears associated with personal or school problems.

The rater, or person completing the form, identifies the age of child on the first page, reads the self-explanatory directions and completes the form which takes about 5-10 minutes. The rater reads the items and checks the corresponding box that applies. The corresponding boxes indicate that a behavior occurs "Never", "Rarely", "Occasionally", "Frequently", or "Very Frequently". Scores are computed based on the frequency (0-4) reported.

The Devereux standardization sample was made up of 3153 children and adolescents between the ages of 5-18. The sample was obtained from 43 schools and other facilities. The sample was representative of the U.S. in terms of age, gender, geographic region, race, ethnicity, socioeconomic status, community size and educational placement.

The Devereux manual (Naglieri, LeBuffe & Pfeiffer, 1993) presents reliability and validity information that support the test's consistency in predicting the emotional status of children. Internal reliability coefficients exceed .90. All coefficients were significant for test-retest reliability when children and adolescents were tested at 3

intervals of 24 hours, 2 weeks and 4 weeks. High correlations were also found for interater and intrarater reliability.

In terms of validity, 6 studies were conducted to discriminate ratings between normal and clinically diagnosed groups. The results indicated a 73.2-79.2% accuracy for groups aged 5-12 years.

The present study aims at identifying children, aged 10-11, at risk for behavior problems. Hence, the original reliability and validity of the Devereux scale apply.

The Metropolitan Achievement Test

The Metropolitan Achievement Test(MAT) was designed to measure the achievement of students in the major skill and content areas of the school curriculum.

A fifth grade population is considered an intermediate level. Scores are obtained for word recognition, reading vocabulary, reading comprehension, total reading, concepts and problem solving, procedures, total mathematics, language, science, social studies, basic battery and complete battery. The time required for this test is 245-255 minutes.

The MAT provides various types of derived scores that include scaled scores, percentile ranks and stanines, normal curve equivalents, achievement/ability comparisons, functional reading levels, content cluster performance categories and proficiency statements.

Functional reading levels place a pupil's performance into three categories. 1. Instructional reading levels which is the level at which a student can succeed in the classroom. 2. The independent reading level is the level at which a student can perform

on his or her own. 3. The frustration level indicates the place at which a student will have difficulty with comprehension.

The purpose of the content cluster analysis is to identify a student's specific strengths and weaknesses within a content area.

According to the publisher, these scores and analyses are valuable to educators for assessing the level of individual student performance in relation to the nation, for determining the status of school achievement and for answering questions about current curriculum.

A review of the MAT in the Mental Measurements Yearbook remarks on the high quality of this achievement test. Content specifications are considered thorough and technical characteristics excellent. It is also commented that The Psychological Corporation, the publisher of this test, is reputable for its tradition of developing standardized tests.

The MAT is the test of choice in the school district participating in the present study. The scores are used to aid in many decisions regarding curriculum, interventions, classroom composition, etc. Consequently, it is a reasonable and consistent measure of academic achievement for the participating subjects.

Research Design

The variables identified in this study are locus of control, academic achievement and behavior. The study is descriptive in nature to examine if any correlations exist

between these variables. Data was collected on each of these variables from the participating subjects.

Procedure

The subjects were administered the Nowicki-Strickland Locus of Control Scale in a group setting. The instructions were read aloud by the examiner, who answered any questions that arose. The examiner then read the first question aloud allowing time for the subjects to check either “yes” or “no”. This continued for each of the 40 questions. The examiner then collected the scales.

Teachers were asked to complete the Devereux Behavior Scale for each subject that completed a locus of control scale. The teachers were instructed to return the scales to examiner when completed.

MAT scores from April of 1999 were collected. These scores were found in the students’ cumulative folders and made available for the purpose of this study.

Research Questions

Null Hypotheses

No relationship will be found between internal/external locus of control and academic achievement in 5th grade students.

No relationship will be found between internal/external control and behavior in 5th grade students.

Ho: M1 = M2

Alternate Hypothesis

Locus of control will be more internalized with high academic achievement in 5th grade students.

Locus of control will be more internalized with 5th grade students who exhibit less behavior problems.

Analysis

The Pearson Product-Moment Correlation Coefficient (r) was used to measure the relationship between the variables.

Summary

The hypotheses of this study were explored by identifying a sample in which data was collected. The testing instruments were utilized to closely examine the data of each variable. The analysis of the data was constructed to explore any existing relationships between the variables.

Chapter Four

Results

The data was analyzed using the Pearson r Correlation. The results have been summarized and presented in Table 4.1. The data supports the idea that the null hypothesis be rejected in favor of the alternate hypothesis. That is, locus of control is more internalized with higher academic achievement and less behavior problems in 5th grade students.

In Table 4.1 correlation is significant at the .01 level and is marked with **.

TABLE 4.1
Correlation Summary

		LOC	DEVEREUX	MAT
LOC	Pearson Correlation	1.000	.409**	-.452**
	Sig. (2-tailed)		.009	.003
	N	40	40	40
DEVEREUX	Pearson Correlation	.409**	1.000	-.444**
	Sig. (2-tailed)	.009		.004
	N	40	40	40
MAT	Pearson Correlation	-.452**	-.444**	1.000
	Sig. (2-tailed)	.003	.004	
	N	40	40	40

** Correlation is significant at the 0.01 level (2-tailed).

From an analysis of the correlation between academic achievement and locus of control, as seen in Figure 4.1, a significant, negative correlation was demonstrated. That is, as achievement scores go up, indicating higher achievement, locus of control scores go down, indicating a more internal locus of control. Thus, it seems appropriate to state that 5th grade students with an internal locus of control have greater academic achievement than those with an external locus of control.

Further analysis of the variables of behavior and locus of control, as seen in Figure 4.2, indicate a significant positive relationship. That is, as behavior scores rise, indicating higher behavior incidents, locus of control scores also rise indicating a more external locus of control. Consequently, it appears that 5th grade students with an external locus of control are reported to exhibit more behavior problems than 5th grade students with an internal locus of control.

The data exploring a correlation between behavior and academic achievement resulted in a significant negative relationship as can be seen in Figure 4.3. That is, as behavior scores increase, indicating higher behavior incidents, achievement scores decrease, indicating lower achievement. This supports the idea that 5th grade students with lower achievement scores have more reported behavior problems than those with higher achievement scores.

Figure 4.1

Achievement and Locus of Control

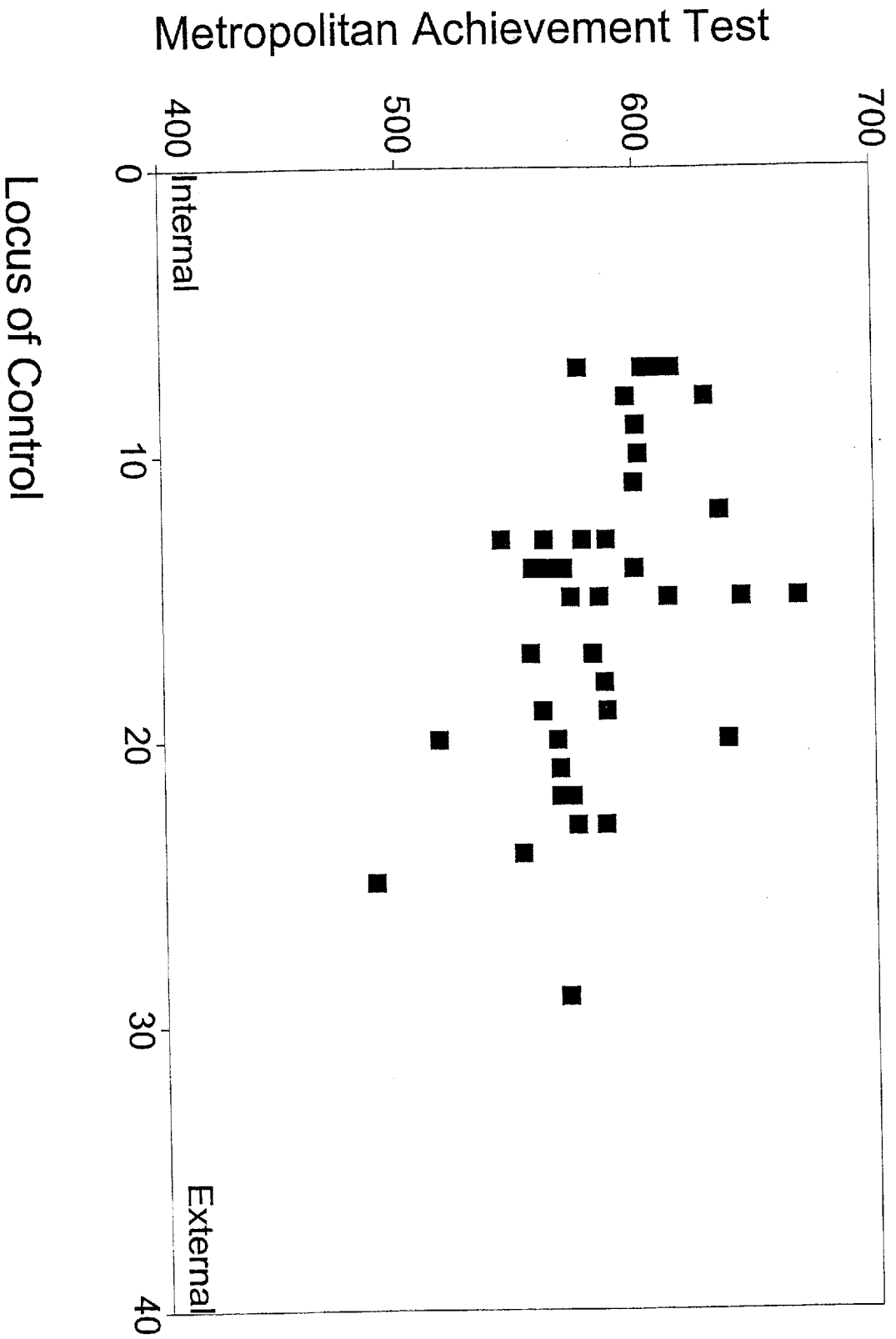


Figure 4.2

Behavior and Locus of Control

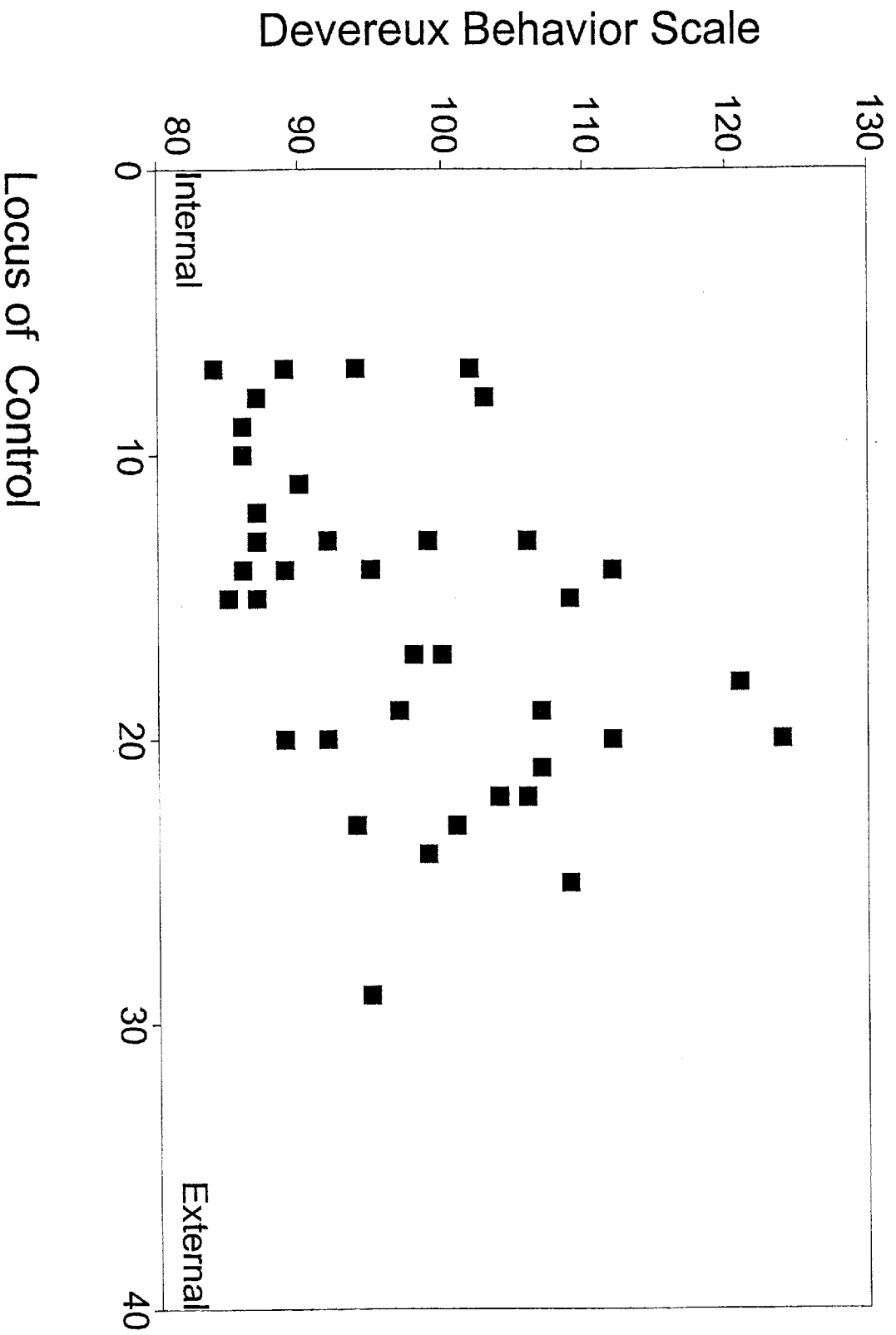
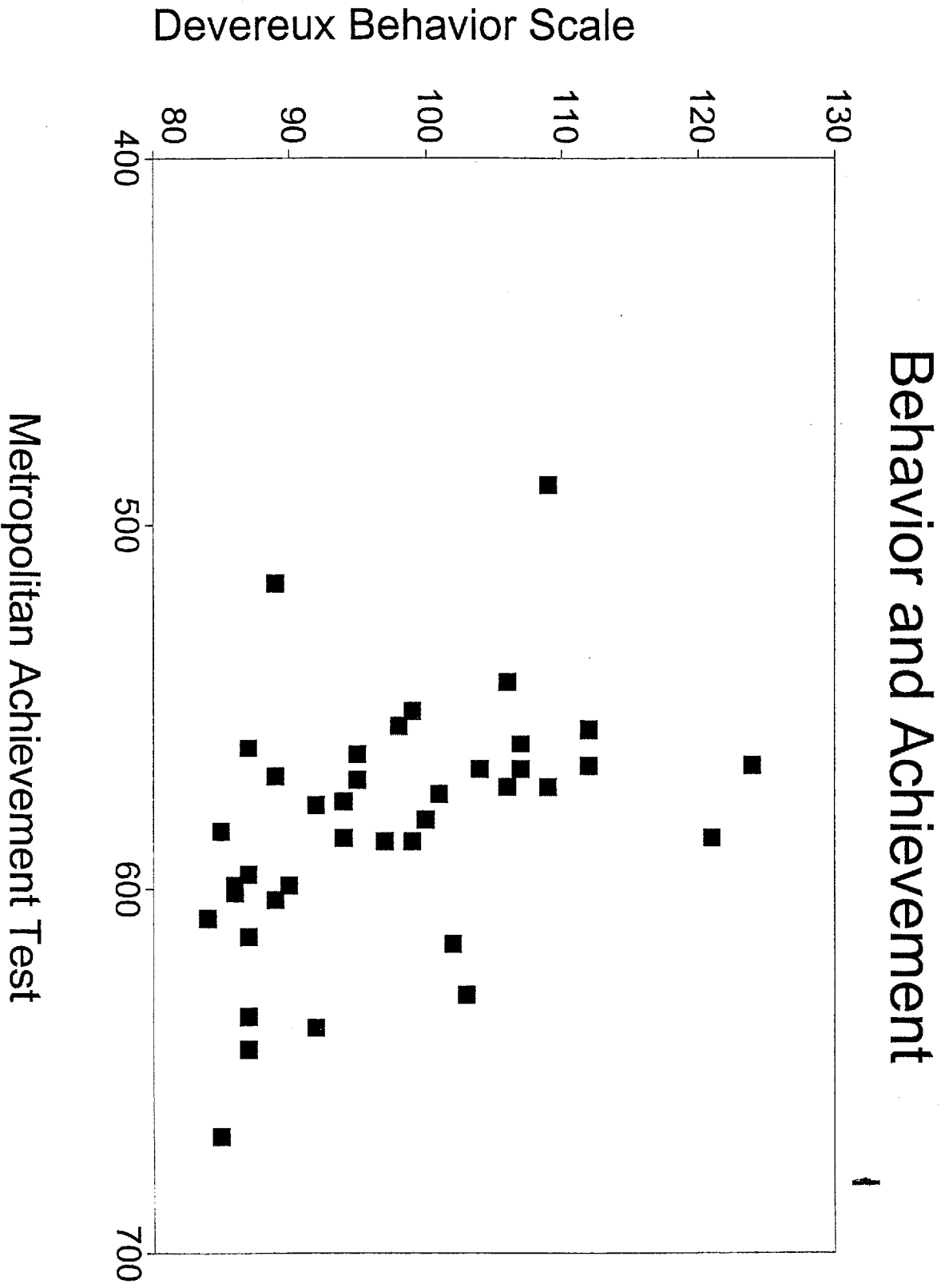


Figure 4.3



Summary

The results of the data analysis demonstrated in this chapter support the hypotheses presented in this paper. A correlation between locus of control and behavior ($r = .409$) was significant at the 0.01 level. An internal locus of control is significantly related to less behavior problems.

A correlation between locus of control and academic achievement ($r = -.452$) was significant at the 0.01 level. Locus of control is more internalized with higher academic achievement.

A correlation between behavior and academic achievement ($r = -.444$) was significant at the 0.01 level. Higher academic achievement was significantly correlated with less behavior problems.

Chapter Five

Summary

This study attempted to investigate the relationship between locus of control and the variables of academic achievement and behavior in 5th grade students. It was hypothesized that locus of control would be more internalized with high academic achievement and less aggressive behavior.

These hypotheses were formulated largely on the theories of Rotter and Bandura. Rotter's popular theory of locus of control focuses on the person's perception of the control they possess over producing their own success or failure. It is theorized that one's perception has a great impact on the learning experience as well as behavior. Bandura's well-known social learning theory focuses on social feedback and how this effects one's self-esteem and expectations. Behavior is a result of one's social experiences, which also impacts achievement and behavior. In chapter two evidence was presented to support these theories.

Chapter three provided information regarding the design of the study. A total of 40 subjects participated in this study. The three principle instruments used in the study were the Nowicki-Strickland Locus of Control Scale, the Devereux Behavior Rating Scale- School Form, and the Metropolitan Achievement Test. Data was collected using these instruments and a relationship was measured using the Pearson Product Moment Correlation Coefficient.

The results of the design employed in chapter three were presented in chapter four. The null hypothesis was rejected in favor of the alternate hypothesis. A significant

negative correlation was demonstrated between academic achievement and locus of control. A significant positive relationship was found between behavior and locus of control. A significant negative relationship was found between behavior and academic achievement.

Discussion

The results of this study tend to support the research presented in chapter two linking locus of control to both academic achievement and behavior.

In terms of achievement, the literature in chapter two supports that students who have a perceived control over what happens to them make better grades and score higher on standardized tests. On the other hand, low persistence and low levels of achievement can characterize those with an external locus of control. (DuCette & Wolk, 1973). Furthermore, the research suggests that individuals with an internal locus of control are more achievement oriented and apply various strategies in higher order cognitive processes and problem solving situations. Whereas, externals avoid success and are less likely to attempt previously failed tasks.

The present study agrees with these suggestions and demonstrates that achievement is effected by locus of control.

In terms of behavior, the literature in chapter two supports that aggression may be a response to one's frustration over their lack of ability to control outcomes. In a study by Bhatia and Golin (1978), it was hypothesized that externals would exhibit greater aggression in response to frustration than internals. The results showed that the

expectancies one has about their ability to control outcomes influences aggression. The less believed the control, the greater the aggression.

Again, the present study agrees with these findings and indicates that students with an external locus of control were reported by their teachers to exhibit more behavior problems.

Conclusions

The results of this study along with the immense research on the area of perceived control provide significant evidence supporting the impact of locus of control on school success.

Success in school is usually thought of as acquiring good grades and performing well on standardized tests. This is certainly one aspect of success, but many other factors are also involved. Factors such as behavior, motivation levels, self-esteem, ability to adapt to various settings, acceptance of constructive criticism and willingness to learn. These factors, according to the literature, are influenced by locus of control.

Consequently, educators need to spend time implementing curriculum and instructional and management techniques that reinforce students' internal tendencies and foster growth towards a more perceived sense of control for students with external tendencies.

Implications for Further Research

A further investigation of the data considering differences in regard to race and/or gender could be explored. This further examination may be helpful in providing additional information for a specific population.

A post-test study that investigates a possible shift in one's perceived control with an increase of age and any effects this may cause on achievement or behavior would expand on existing research suggesting that locus of control becomes more internal with age.

An exploration on the causality of locus of control or an understanding of the how's and why's of one's perceived control could contribute to expanding awareness and developing intervention.

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