

1-1-1997

Relationships between cognitive styles and written composition of African American ninth grade students in a metropolitan school district in Western Michigan /

Catherine W. Large

Follow this and additional works at: http://digitalcommons.wayne.edu/oa_dissertations

Recommended Citation

Large, Catherine W., "Relationships between cognitive styles and written composition of African American ninth grade students in a metropolitan school district in Western Michigan /" (1997). *Wayne State University Dissertations*. Paper 1223.

This Open Access Dissertation is brought to you for free and open access by DigitalCommons@WayneState. It has been accepted for inclusion in Wayne State University Dissertations by an authorized administrator of DigitalCommons@WayneState.

RELATIONSHIPS BETWEEN COGNITIVE STYLES AND WRITTEN COMPOSITION
OF AFRICAN AMERICAN NINTH GRADE STUDENTS IN A METROPOLITAN
SCHOOL DISTRICT IN WESTERN MICHIGAN

by

CATHERINE W. LARGE

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

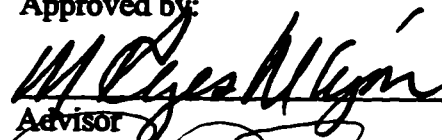

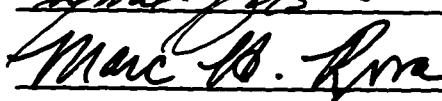
for the degree of

DOCTOR OF EDUCATION

1997

Major: CURRICULUM
AND INSTRUCTION

Approved by:

	12/5/97
Advisor	Date
	12/5/97
	12-5-97

DEDICATION

To my husband Earnest Large for his love, support and encouragement throughout the duration of this project. I also devote this document in fond memory, to my mother Lucille Weary-Craft for instilling in me the value of an education. I also dedicate this dissertation to my sons, Eric and Markeith. It is the children who inspire and motivate me every day.

ACKNOWLEDGMENTS

Sincere appreciation is express to the members of my doctoral committee: Dr. Reyes M. Mazone, Dr. Marc Rosa, and Dr. Richard Gibson for their interest, support, and assistance throughout the planning, development, and final stages of this dissertation.

Appreciation is also expressed to Dr. Abiodun Goke-Pariola for his assistance in reviewing the dissertation manuscript.

Thanks are given to my support group for their inspiration and enthusiasm. Appreciation is expressed to Mrs. Barbara Large, Mrs Donna Poag, Mrs. Sylvia James,, Mrs. Michelle Smith, Ms Dorothy Butler, Ms. Jean Pitmon, Mrs. Pam Clinkscales, Mrs. Janice Johnson, “Mother” Dora Gill, and “Mother” Mandolyn Buchanan for their friendship, prayers and support in this venture.

Special thanks are expressed to my number I cheerleader, Mrs. Lorna VanTil for her continous encouragement, reassurance, and typing of this document.

And finally, I wish to thank students, administrators and Mr. Vern Yetman for their cooperation and assistance in the collection of the data for this study.

TABLE OF CONTENTS

	Page
Dedication	ii
Acknowledgements.....	iii
List of Tables.....	viii
List of Figures.....	x
Chapter	
I INTRODUCTION AND BACKGROUND	1
Student Writing.....	1
African American Vernacular English in the Classroom.....	3
Linguistic Orientation.....	6
Psychological Orientation.....	11
Statement of the Problem.....	13
Significance of the Study.....	13
Purpose of the Study.....	13
Research Questions.....	14
Statement of Hypotheses.....	14
Research Hypothesis.....	14
Null Hypotheses.....	15
Definition of Terms.....	15
II REVIEW OF THE LITERATURE	18
The Study of Language.....	18
The Study of Composition.....	20
African American Language and Composition.....	21

African American Black Vernacular English.....	22
Communicative Style.....	22
Stages In The Evolution of AAVE.....	26
Examination of the Writing of Blacks.....	30
Relationship Between Speech and Writing.....	34
Style.....	35
Black Style.....	36
Semantics.....	39
Cognitive Styles.....	39
African American Cognitive Styles.....	44
FD And FI Styles And The Academic Setting.....	48
Cognitive And Linguistic Assumptions In Language And Composition.....	51
Reflections Of Cognitive Style In Writing.....	53
Cognitive Style And Culture.....	55
Cognitive Style And Sex.....	57
III METHODOLOGY	60
Research Design.....	60
Tests And Measures.....	61
Group Embedded Figures Test.....	61
Michigan Educational Assessment Program.....	64
Writing Assessment In Michigan.....	65
Development Of Assessment Plan.....	67
Scoring.....	70

	Scorers.....	71
	The Report Form.....	71
	Population And Sample.....	71
	Selection of Subjects.....	71
	Research Subjects.....	72
	Procedure.....	73
	Group Embedded Figures Test.....	73
	Michigan Educational Assessment Program (MEAP).....	74
	Data Analysis.....	80
IV	DATA ANALYSIS AND RESULTS	79
	Interpretation And Discussion Of The Statistical Analysis Of the Writing Measure Of The MEAP Eighth Grade Writing Test.....	85
	Summary And Discussion.....	91
V	DISCUSSION AND CONCLUSION	99
	General Observations.....	102
	Specific Observations.....	105
	Educational Implications.....	107
	Limitations Of The Study.....	111
	Direction for Future Research.....	112
	Conclusion.....	113
	APPENDIX A. CHARACTERISTIC OF FIELD-INDEPENDENT AND FIELD-DEPENDENT COGNITIVE STYLES AND MICHIGAN ASSESSMENT PROGRAM (MEAP) EIGHTH GRADE WRITING TEST; STUDENT INDIVIDUAL REPORT AND PARENT REPORT.....	114
	APPENDIX B. INSTRUCTIONS FOR TAKING THE GEFT.....	120

APPENDIX C. LETTERS OF TRANSMITTAL SENT TO SCHOOL PERSONNEL.....	122
APPENDIX D. LETTERS REQUESTING PARENTAL PERMISSION.....	127
APPENDIX E. TABLES.....	130
APPENDIX F. FIGURES.....	146
APPENDIX G. CODING SHEET.....	160
REFERENCES.....	162
ABSTRACT.....	171
AUTOBIOGRAPHICAL STATEMENT.....	173

LIST OF TABLES

TABLE	Page
1. Characteristics of f Field Independent and Field-Dependent Cognitive Styles that are Relevant to the Learning Process.....	115
2. MEAP Eighth Grade Writing Test - Description for Standard Setting.....	117
3. Michigan Educational Assessment Program - Individual Student Report.....	118
4. Parent Report.....	119
1. Frequency Distribution and Percent of Raw Scores attained by Subjects on the Group Embedded Figures Test.....	131
2. Frequency Distribution and Percent of Subjects by Age.....	132
3. Frequency Distribution and Percent of Subjects by Sex.....	133
4. Frequency Distribution and Percent of Subjects by Cognitive Style Category.....	134
5. Frequency Distribution and Percent of Low Feld-Independent Subjects on the Group Embedded Figures Test.....	135
6. Frequency Distribution and Percent of High Field-Independent Subjects on the Group Embedded Figures Test.....	136
7. Frequency Distribution and Percent of Low Field-Independent Subjects by Age and Cognitive Style Category.....	137
8. Frequency Distribution and Percent of High Field-Independent Subjects by Age and Cognitive Style Category.....	138
9. Frequency Distribution and Percent of Low Field-Independent Subjects by Sex and Cognitive Style Category.....	139
10. Frequency Distribution and Percent of High Field-Independent Subjects by Sex and Cognitive Style Category.....	140
11. Group Mean, Median, Mode and Range of the Raw Scores of Subjects on the Michigan Education Assessment Program Eighth Grade Writing Test.....	141
12. Frequency Distribution and Percent of Raw Scores Attained by Low Field-Independent Subjects onthe Michigan Education Assessment Program Eighth Grade Writing Test.....	142

13.	Frequency Distribution and Percent of Raw Scores Attained by High Field-Independent Subjects on the Michigan Education Assessment Program Eighth Grade Writing Test.....	143
14.	Means, Standard Deiviation, and Standard Error for the Raw Scores on the Writing Measure of the Michigan Education Assessment Program Eighth Grade Writing Test According to Cognitive Style Categories.....	144
15.	One-Way Analysis of Variance for the Raw Scores on the Michigan Education Assessment Program Eighth Grade Writing Test.....	145

LIST OF FIGURES

Figure		Page
1.	Histogram of the Raw Scores on the Group Embedded Figures Test Attained by Subjects.....	147
2.	Bar Chart of the Percent of Subjects by Age.....	148
3.	Bar Chart of the Percent of Subjects by Sex.....	149
4.	Bar Chart of the Percent of Subjects by Cognitive Style Category.....	150
5.	Histogram of the Frequency Distribution of Low Field-Independent Subjects on the Group Embedded Figures Test.....	151
6.	Histogram of the Frequency Distributio of High Field-Independent Subjects on the Group Embedded Figures Test.....	152
7.	Bar Chart of the Percent of Low Field-Independent Subjects by Age.....	153
8.	Bar Chart of the Percent of High Field-Independent Subjects by Age.....	154
9.	Bar Chart of the Percent of Low Field-Independent Subjects by Sex.....	155
10.	Bar Chart of the Percent of High Field-Independent Subjects by Sex.....	156
11.	Histogram of the Raw Scores on the Michigan Education Assessment Program Eighth Grade Writing Test Attained by Subjects.....	157
12.	Histogram of the Frequency Distribution of the Raw Scores on the Michigan Assessment Program Eighth Grade Writing Test Attained by Low Field-Independent Subjects.....	158
13.	Histogram of the Frequency Distribution of the Raw Scores on he Michigan Education Assessment Progrm Eighth Grade Writing Test Attained by High Field-Independent Subjects.....	159

Chapter I

INTRODUCTION AND BACKGROUND

It goes without saying that communication skills are vital for successful participation in society. The ability to communicate in spoken and written language is not an academic luxury, rather, it has become an absolute prerequisite. It is a key to economic and social success in today's competitive society. Many educators, policy-makers, entrepreneurs, and others have identified a writing "crisis" in contemporary American schools. All too often this "crisis" is perceived to be most severe among African Americans. Many contend that if Black people are not fluent in Standard American English they are intellectually inferior. These notions have been carried over into the classroom where Black students are told they must learn to thrive in a white-oriented educational system. While teachers are correct in teaching these students the language of wider communication, teachers must also be open to accepting the fact that Black English is a legitimate form of speech, a dialect of English which contains its own lexicon and rules. Deviations in Black English from Standard American English are not random, but, rather predictable. To demonstrate this point, this study will examine the relationships between cognitive styles and written composition of African American ninth grade students. This researcher postulates that language reflects cognitive styles and that those whose cognitive styles differs from the required mode use language in ways that do not always meet the academic standards, and, thus are labeled as poor writers.

Student Writing

The quality of writing among African American students continues to be of major concern to educators, policy-makers, researchers and the lay community. African American students have consistently scored lower than their European American counterparts in all rounds of the National Assessment of Educational Progress (NAEP) since its inception in 1969 (National Assessment of Educational Progress, 1980). According to Smitherman (1992), even in that decade of tremendous progress, for

African American student writers, 1969 - 1979, where 1979 NAEP results indicated that they had improved twice as much as their white counterparts, African American students still were not writing on par with White students, as the 1979 NAEP results also indicated.

From 1985-1990, the National Center for the Study of Writing and Literacy showed that the teaching and learning of writing needed to be improved and reshaped. Most importantly, the Center's findings have shown that schools need a greater diversity of teaching approaches that recognize the skills students already bring with them. They need approaches that give learners the opportunity to find their own "voices" in writing, and that connect with student lives (Feedman & Hechinger, 1992)

Gene Lyons (1976) blames the "academic hierarchy" that puts little or no value on teaching written composition and, thus, fosters the "advancement of ignorance and the mass production of unintelligible footnotes." Bergen, (1976) blames the decline in effective writing on the emphasis placed upon unimportant details, such as neatness, and a lack of thought as against the real requirements of effective writing. Smitherman, (1977) writes about the remedial programs which were put in place for Black youths who were seen as intellectually inferior to their White counterparts because of their use of Black English. She asserts that those who are in power positions -- always dictate what and who is acceptable. Thus, being bidialectal posed a negative stigma on black students' records in the sixties. In the seventies, many prominent educators critically attacked the American educational system for lack of accountability (Smitherman, 1977). In the same vein, Smitherman advocates accountability in the classroom. Smitherman suggests that urban teachers should teach students about the political and economic realities to prepare them for the future.

The answer to developing African American student writers is not more emphasis on the basics, if by basics we mean more drills on surface errors. Chapman, (1994) maintains that we must get African American students, along with other inexperienced

writers, **WRITING MORE**, and he believes more writing will come in the multicultural, multi-ethnic composition classes of the 21st century first by coming to voice - a recognition of one's own voice, and then assimilating other voices.

bell hooks, (1989) posits in her feminist treatise, "Talking Back", that "...the idea of finding one's voice or having a voice assumes a primacy in talk, discourse, writing, and action". For African American students, finding voice in talk or orality has never been a problem (Gill, 1992). Rather they must learn, Gill argues, that they can be equally as powerful with their written voices.

Elbow (1981), defines voice as, " what most people have in their speech but lack in their writing; it brings life to writing; it has the texture and sound of you. It distinguishes you, like your real voice does in speech, from anyone else."

Eileen Oliver states that, "When we get into issues of dialect and basic writers from "depressed areas" in need of "special work" in the language arts. Middle-class mainstream students about to enter the teaching force haven't a clue. Many new teachers believe that lots of skill level work, lots of graded assignments and lots of short-term activities will "bring these kids along so that eventually, they will be able to do "grade-level work." With little understanding of dialectal issues, fluency in prose, importance of relevance in assignment, these future teachers promise to repeat the long-standing errors in composition instruction.

It is worth noting in all of this, that some scholars have suggested that native translation from orality to literacy may be more difficult for African American students. According to Gamperz, Kaltman, and O'Connor (1984) the oral styles or structure of expression in African American Vernacular English (AAVE) are less easily translatable into the standard academic forms of expository written prose than those of some other cultural groups in our society.

African American Vernacular English in the Classroom

Many Black students do not have a good command of the lingua franca, or

Standard American English. Yet, they and other non-standard speakers and writers come into classrooms daily in large numbers. Many classroom teachers believe that these Black students just speak "sloppy English." This position is refuted by several studies that describe "Black English". Many of the ambiguous studies focused on oral language. Linguists like Labov (1972) Fasold and Wolfram (1970) recorded and analyzed speech samples of Black speakers. They described it as a dialect with its own rules, a valid communication system. Their informants were generally inner-city Black males. Although not all Blacks nor all members of any group for that matter speak alike, and even most studies described only one type of speech of the inner-city adolescent male. The term "Black English" was used by many to apply to all English spoken by Blacks.

Cooper, (1979) notes that at the college level, an examination of the writing of Black students in the 60's and 70's at first contributed to the "irrelevant" designation of traditional composition classes and later contributed to the backlash cry of a writing crisis; yet the attention to the college level non-standard student has been sparse. In the 70's there were two major trends with regards to non-standard users and the teaching of composition. The first was the "Student's Right to his own language" adopted by the National Council of Teacher Education (NCTE) from the Executive Committee of the Conference on College Composition and Communication (CCCC) in 1972 and supported by a position paper in a special issue of College Composition and Communication in 1974. The second trend was the old and still predominant idea of total eradication of non standard dialects so that the student will write in an "educated" manner. In defense or support Allen Smith has responded to the position. Smith argues that no one has a right to his own language: "They only have a right to learn a language which will produce the proper effects on whatever audience they may speak or write to...We teach English as it has come down to us over many centuries of thought and effect. If we don't do this...we won't last long teaching dialectology or vocational skill" (Smith, 1976, pp. 158-159).

It is not the intent of this study to focus on whether or not non-standard dialects

should be eradicated. Rather, the present study examines if a connection exists between cultural cognition and language composition.

Ball (1992) speaks of two key principles in relation to African American student writers. The first key principle is the notion of Multiple voices - with an emphasis on acknowledging the value in diverse voices and in cultivating a desire to actually "hear" those voices. Within many traditional writing classrooms, however, composition continues to lack broad participation of diverse voices in identifying, constructing, and formulating the knowledge we expect all students to master. Ball notes that the presence of voices representing literacy practices among AAVE speakers, both past and present, are particularly absent in most of our English language arts curricula.

The second key principle, Ball poses is to remember that, used strategically, these devices can be translated into practices that promote strategic school success. At the classroom level, African American students' language preferred text design patterns (Ball, 1992) and modes of expression can be included in the curriculum, not only as building blocks for bridging African American students' community-based experiences with academia-based text design patterns and expressions, but also as rich resources of knowledge that all students should know as they broaden their abilities to express their ideas in a variety of forms.

Traditionally, AAVE speakers' expressive skills acquired through their cultural socialization practices, which emphasize community interaction, adaptability to changing circumstances, and individual interpretive talents. Consequently, AAVE speakers acquire language skills characterized by adaptability, collaboration, problem solving, and individual responsibility for making interpretive judgments (Smitherman, 1977; Heath 1989). These are some of the discourse skills AAVE speakers draw on in their out-of-school literacy experiences. Traditionally, AAVE speakers also use rhythmic language, patterns of repetition and variation, expressive sounds, and phenomena encouraging participative sense-making, like using dialogue, tropes, hyperbole, and call and response

patterns in their traditional ways of expressing their ideas.

Linguistic Orientation

Modern linguistic theories of language acquisition have all been influenced by Chomsky's work, (1957, 1965, 1975). Chomsky established that language is species specific and innate. However, his theory does not go far enough in explaining language variety among speakers of the same language nor does it adequately account for meaning or language use. Therefore, a major problem in studies of child language has focused on social speech. Halliday (1977) states: "The functional interpretation of the child's meanings implies a sociolinguistic approach, in which the learning of the mother tongue is interpreted as a process of interaction between the child and other beings...In this context, structure no longer occupies the center of the stage" (pp.5-6). Halliday considers his sociolinguistic approach complementary to a psycholinguistic one and acknowledges that "the child already has a linguistic system before he or she has any word or structure" (p. 6). Thus, though humans innately have competence for language as Chomsky has argued, the particular form of language the person acquires is shaped by social interaction within the community.

The sociolinguistic approach to language acquisition thus provides a format for discussion of the relationship between the culturally transmitted language features and the corresponding values reflective of the different world views of divergent cultures. This study examines the dimension of cognitive styles in understanding the relationships between language and culture.

The sociolinguistic study of language varieties, specifically, the work on African American Vernacular English (AAVE), was a major research piece which focused on bidialectal education. Many bidialectal programs were started with the intent of teaching Standard English forms while, at the same time, maintaining the student's own vernacular language. For the first time in this country emphasis was placed on the validity of dialect differences.

While in theory the aim of bidialectal education is to maintain both the dialect and the standard form of the language, in practice the focus has remained on acquisition of Standard English. In learning the language of his or her culture, the child may not learn the school's standard. Attitudes toward the vernacular are reflected in such comments as: "The learner needs to develop a new set of language habits...the terms 'right' and 'wrong' are often used...right' means 'appropriate to the situation', and 'wrong' mean likely to put the speaker at a disadvantage" (Allen, 1969, pp.124-125). "Deep are the roots of the language handicaps from which these (vernacular speakers) children suffer...they do not know the school's language" (Hornburger,1969, p. 155).

Articles on the poor writing performance of college students tend either to ignore bidialectalism or blame the recognition of the validity of the dialect for the writing crisis. For instance, the well-known philologist, Mario Pei argues that writing skills have declined because of "a school preaching that one form of a language is as good as another; that...We must not try to correct or improve language, but must leave it alone; that the only language activity worthy of the name is speech on the colloquial, slangy, even illiterate plane; that writing is a secondary, unimportant activity" (Pei in "Why Johnny Can't Write," 1975, p.58). Pei singles out "structural linguists" as those who contend that the Idiom is superior to the written and that no standards exist for any language except those standards maintained as it is spoken. DeCamp (1972) argues that some teachers are confused and do not know what to teach because of the determination that all dialects are valid. "The Miss Fidditch of an earlier generation knew precisely what was right and what was wrong. Her rule book told her that students may have continued saying what family and friends said, but she pressed for the correct form...without the

infallibility of the rule book, today's teachers and students have no single standard by which to determine usage" (p. 383).

By limiting the definition of Black English to the set of grammatical and phonological features identified by linguists such as Fasold and Wolfram (1970), those concerned with understanding the challenges of Black student writers have overlooked additional features that are at variance with academic demands. There are semantic, stylistic, and organizational differences among writers from different cultures.

Smitherman (1977) classifies "the Black modes of discourse into the following broad categories: call-response; signification (of which the Dozens is a strictly Secular, 'streetified' example); tonal semantics; narrative sequencing (of which the Toasts are a strictly secular, 'streetified' example). One of the most familiar, tonal semantics, "refers to the use of voice rhythm and vocal inflection to convey meaning in Black communication" (Smitherman, 1977). A clear example of this is noted in "the preaching - lecturing" (Smitherman, 1977) of Jesse Jackson. Smitherman uses Black culture and lifestyle from as far back as their roots in Africa before Blacks were brought over as slaves as a foundation to validate the use of Black English in today's society. "Black English, Black Dialect, Black Idiom,..." (Smitherman, 1977) -- What do these words mean? Smitherman defines Black English in the following way,

Black Dialect is an Africanized form of English reflecting Black America's linguistic-cultural African heritage and the conditions of servitude, oppression, and life in America. Black language is Euro-American speech with an Afro-American meaning, nuance, tone, and gesture. The Black Idiom is used by 80 to 90 percent of American Blacks, at least some of the time. It has allowed Blacks to create a culture of survival in an alien land, and as a by-product has served to enrich the language of all Americans. (1977, p.)

Smitherman emphasizes that along with their bodies came the African traditions,

lifestyle and language patterns. She writes that Black Dialect is split into two categories: language and style. Language refers to "sounds and grammatical structure" (Smitherman, 1977). Style is "the way speakers put sounds and grammatical structure together to communicate meaning in a larger context" (Smitherman, 1977). Put simply, "language is the words, style is what you do with the words" (Smitherman, 1977).

Smitherman explains Black Semantics as having been based in "the West African language background; servitude and oppression; music and 'cool talk'; the traditional Black church" (Smitherman, 1977). There are three types of language and verbal concepts that are derived from the West African language background. These include "the words of direct African origin; words that are loan-translations; inflated vocabulary" (Smitherman, 1977). Words such as "gorilla" and "elephant" are African in origin. Loan-translations are those words "in which the literal meaning of the African phrase is retained in Black English" (Smitherman, 1977). Words like "hip" and "dig" are loan-translations; they are not translated according to Standard American English meanings, but they are translated according to their Black English meanings. The last type of language and verbal concept is inflated vocabulary, or "over elegant vocabulary".

Smitherman, (1994) and others began working within their professional societies and organizations to inform and encourage the mainstream to recognize and legitimize the culture, history, and language of those on the margins. She and her colleagues decided to write a resolution which would affect the students' right to their own language. The document was entitled "The National Language Policy." While the document upheld that "all of these dialects [of American English] are equally efficient as systems of communication" (Smitherman, 1994), it also noted that there was an inherent need for the students to master the Language of Wider Communication - - Standard American English. Smitherman (1994) and her colleagues were quick to add that, "We recognized that spelling, punctuation, usage, and other surface structure conventions of Edited American English (EAE) are generally what has been given all the play (attention) in

composition classrooms " After researching the works of many linguists, such as Noam

Chomsky, Smitherman and her colleagues contend that

... dialect ... plays little if any part in determining whether a child will ultimately acquire the ability to write EAE ... Since the issue is not the capacity of the dialect itself, the teacher can concentrate on building up the student's confidence in their ability to write ... the essential functions of writing (are) expressing oneself, communicating information and attitudes, and discovering meaning through both logic and metaphor ... (thus) we view variety of dialects as an advantage ... one may choose roles which imply certain dialects, but the decision is a social one, for the dialect itself does not limit the information which can be carried, and the attitudes may be most clearly conveyed in the dialect the writer finds most congenial ... (Finally) the most serious difficulty facing 'non-standard' dialect speakers in developing their writing ability derives from their exaggerated concern for the least serious aspects of writing. If we can convince our students that spelling punctuation, and usage are less important than content, we have removed a major obstacle in their developing the ability to write. (Smitherman, 1991, p. 23)

Whereas Smitherman believes that students with different dialects should not be put at risk because of their language system, Holly Craig and Julie Washington state that children who are from poor, urban, Black families put themselves at risk when they enter into a system of formal education (Craig and Washington, 1994). Craig and Washington (1994) explain that, "Some African-American children who use African-American English also present significant communication disorders. Unfortunately, because few assessment instruments are available to distinguish disorders from dialectal variations, this subgroup of African-American children is of high risk for academic failure."

In another vein, anthropologist Signithia Fordham adds fuel to the flame. Her studies show that Black youths who are highly intelligent hide it from their peer groups by "talkin' `the talk and walkin' the walk". She explains that black students do not encourage each other to succeed in a "white" world. "Black students often disparage as "acting white" such school sanctioned behaviors as using Standard English, spending time in the library, writing poetry, or working hard to get good grades" (Fordham, 1993).

Because writing provides a record that can be reread and "corrected" by the writer according to his or her ideas of what his language should ideally be, writing may be more reflective of language competence than speech. Chomsky (1957, 1965, 1975) stresses the

point that performance (speech) will often be ungrammatical because of irrelevant factors such as lapses of attention or lapses of memory or malfunctions of the psychological mechanisms underlying speech. Because of nonverbal cues, and the particular context of a given speech situation, such lapses in production of the ideal language are generally "not corrected" as they would most likely be if written.

The idea of competence in language has been defined by Dell Hymes (1974) to include more than the underlying knowledge of the language as stated by Chomsky. Hymes defines a Communication competence which includes four aspects: "(a) systematic potential whether and to what extent something is not yet realized ... (b) appropriateness ... (c) occurrence ... (d) feasibility ... knowledge with regard to each is part of the competence of a speaker-hearer in any full sense of the term" (p. 95).

The field of psychology also provides insight into cultural differences in language usage and recognizes a wider range of features than sociolinguists generally identify. In addition to its linguistic foundation this study has a psychological base.

Psychological Orientation

This study attempts to examine a formal relationship between language use (composition) and cognitive style. For the purpose of this study, the following meanings are applicable; cognition refers to the process of knowing and includes both awareness and judgment; cognitive style refers to the manner in which knowledge is processed, including how this knowledge is perceived and how it is manifested in actual behavior, specifically, language behavior.

The psychological theory upon which this study is based grows out of the work of Vygotsky in the early decades of the century. Vygotsky's theory, which is compatible with current theories of sociolinguistic approaches to language development, provides an explanation of differences in language use among sub-cultures of the same general language community. Vygotsky argues that:

Although practical intelligence and sign use can operate independently of each other in young children, the dialectical unity of these systems in the

human adult is the very essence of complex behavior ... symbolic activity (performs) a specific **organizing** function that penetrates the process of tool use and produces fundamentally new forms of behavior ... the following conclusion may be made: the most significant moment in the course of intellectual development, which gives birth to the purely human forms of practical and abstract intelligence, occurs when speech and practical activity converge. (1978, p. 24)

Thus, according to Vygotsky speech is an intimate part of cognitive development; with the help of speech, the child masters his surroundings. Vygotsky did not see a separation between symbolic development and practical development as Piaget and others did. Vygotsky's continued investigation observed that activities and language use of persons from practical cultures, as opposed to those from technological cultures, reflected a different cognitive style.

After Vygotsky's death his associate, Luria, carried on his work and developed the idea of two different, culturally determined cognitive styles which tended to be stable but which could be modified by education and experience. Luria argued that these different cognitive styles were reflected in many aspects of behavior, including language (1978). Hence, Vygotsky and Luria showed diversity in cognitive development as a function of cultural influences. They also showed that there are dimensions of cognition that are a function of culturally specific difference but not of universal human behavior. It is important to note that Vygotsky (1978), Luria (1976) and those who have further developed their theory demonstrate from empirical evidence that there is a cultural not a genetic base for cognitive difference. These investigators do not impose a value judgment on the desirability of one style over another but do recognize the higher productivity of a particular style given the demands of a particular situation. Desirability of one cognitive style over the other is viewed as a function of the needs of the situation. The theory that argues for culturally-based cognitive differences is compatible with the work of Black researchers who have identified differences in language use as a function of differences in cognitive style (cf, Matthews, 1977; Cooper, 1978).

Cognitive style is an individual difference variable defined as a consistent mode of information processing (Stone, 1976). They "are the stable ways people differ in

perception, encoding and storage of information" (Wittrock, 1979. p.7).

The two different cognitive styles under discussion have been identified as field independence (FI) and field dependence (FD). Field dependent cognitive style is also known as field sensitivity, relational thinking, holistic (spelled wholistic by some researchers) thinking, concrete thinking, situational thinking or gestalt thinking. The field dependent thinker relates to the environment (field) as a whole and seldom analyzes or structures it. The field independent style, most commonly alternately called abstract or analytic thinking, focuses on part of a field as distinct from the surrounding field. The field dependent thinker is socially oriented; the field independent thinker is task oriented.

Most researchers in the area see a continuum of cognitive style from FD to FI. Research suggests that there are indications of an individual's favored style in all aspects of behavior, including language. The link between cognitive style and language is a close one. Nystrand (1977) states: "These two modes of consciousness interact with language ... they can be related to different uses of language" (p.95). The cultural link with cognitive correlates with Halliday's observation (1977) that "the child learns his culture in the process of learning his language." If this indeed does happen, then it is likely that aspects of that culture are found in the language.

Statement of the Problem

There are relationships between low field-independent and high field-independent cognitive styles and written compositions of African American ninth grade students from six high schools in the second largest school district in Michigan.

Significance of the Study

The information yielded from this study can assist students in becoming more effective writers. Knowledge of students' cognitive styles can improve teachers' methodologies and development of students' skills.

Purpose of the Study

The purpose of this study is to identify relationships between low field-

independent and high field-independent cognitive styles and written composition of ninth grade African American students from six high schools in a metropolitan school district in western Michigan.

Research Questions

While educators, and politicians are discussing a unilanguage America for all to communicate the same way, this study will address the following questions:

What are the relationships between low field-independent and high field-independent cognitive styles and written composition of ninth grade African American students from six high schools in a metropolitan school district in Western Michigan?

The specific question that this study will address includes:

Are there differences in written composition by low field-independent and high field-independent cognitive styles?

Specifically:

Do high field-independent thinkers have better writing comprehension than low field-independent thinkers?

Statement of Hypothesis

Research Hypotheses

Research shows that cognitive styles permeate all forms of intellectual behaviors and since African American students may manifest a cognitive preference that is at odds with the preferred mainstream cognitive pattern, they are identifiable in ways African American students write. It is reasonable to assume that cognitive styles are reflected in writing. More specifically raw scores on the writing test of the Michigan Educational Assessment Program (MEAP) Eighth Grade Writing Test are lower for African American ninth grade low field-independent thinkers than for African American high field-independent thinkers, that is...African American low field-independent thinkers are more expressive, descriptive and wordy.

Specifically:

1. **High field-independent thinkers demonstrates higher raw scores on written composition of the MEAP Eighth Grade Writing Test than low field-independent thinkers.**

Null Hypotheses

The specific null hypotheses to be examined is that: high field independent and low field independent cognitive styles are not reflected in writing: that is, there are no statistically significant differences in raw scores on the writing test of the MEAP Writing test.

Specifically:

1. **High field-independent and low field-independent thinkers demonstrate no statistically significant difference in raw scores on writing comprehension of the MEAP Eighth Grade Writing Test.**

DEFINITION OF TERMS

Cognitive Styles: Refers to "the characteristics, self-consistent modes of functioning which individuals show in their perceptual and intellectual activities" (Witkin *et al.* 1971. p.3). Because of the stability and pervasiveness of cognitive styles they cut cross diverse psychological areas.

Field Dependent Cognitive Style: People with this cognitive style "place more emphasis on external referents or primary guides in information processing" (Witkin 1977. p. 14). Field-dependent persons are more global; internal referents are less available for their use; are less likely to analyze and structure experiences; respond to dominant properties of the field; and tend to adhere to the organization of the field (Witkin.1977).

Field-Independent Cognitive Style: People with this cognitive style "are likely to use internal referents or primary guides in information processing" (Witkin.1977.p.14). Field-independent persons are more articulated or analytical; use internal referents to analyze and structure experiences depending upon the task at hand; and are not easily influenced by the organization of the field (Witkin.1977).

Black Dialect Categories: language and style. Language refers to "sounds" and grammatical structure" (Smitherman, 1977). Style is "the way speakers put sounds and grammatical structure together to communicate meaning in a larger context" (Smitherman, 1977).

Black Dialect: An Africanized form of English reflecting Black America's linguistic-cultural African heritage and the conditions of servitude, oppression, and life in America (Smitherman, 1977).

Black Language: An Euro-American speech with an Afro-American meaning, nuance, tone, and gesture. The Black Idiom is used by 80 to 90 percent of American Blacks, at least some of the time. It has allowed Blacks to create a culture of survival in an alien land, and as a by-product has served to enrich the language of all Americans (Smitherman, 1987).

Voice: What most people have in their speech but lack in their writing; that which brings life to writing; a texture; it sounds like the speaking voice of the writer (Elbow, 1981).

Oral Style: The structure of verbal expression.

Style: involves a choice of form without a change of message; it includes the motives for the choice and its effects, (Bolinger, 1975).

Overlongant Vocabulary: inflated vocabulary (Smitherman, 1977).

Transitional features: Those that may come about as a nonstandard language user moves toward the Standard Language (Cooper, 1978).

Loan - Translations: Those words in which the literal meaning of the African phrase is retained in Black English (Smitherman, 1977).

Writing Process: Writing is a process of making meaning. The process include: prewriting, drafting, revising, proofreading, and publishing (Core Outcomes, p.57).

Stance: The writer's attitude towards his/her subjects and audience.

Discourse: The ways of using a language.

Code Switch: Ability to speak in mainstream settings and the ability to retain and speak

in settings with the native tongue.

Double Conscienciousness: Being bilingual or Bidiatctal

Role: Describes the particular relationship the writer defines for him/herself.

Chapter II

REVIEW OF THE LITERATURE

Literature reviewed pertinent to this study comes from the areas of linguistics, including studies of Black English; psychology, research on field dependence; and field independence and literature specifically concerned with written composition, including stylistic features which have often been ignored in examination of writing and which are often the carriers of concepts such as distance and classification.

The Study of Language

Most linguistic theories since 1957 have been influenced by Noam Chomsky. Only recently has research on language expanded its focus beyond the limits of spoken language to provide some examination of writing. Chomsky's theory of transformational generative grammar significantly influenced studies of language acquisition since the 1950's. However, his theory has come under attack as being too limited, especially as it dismisses the role of social and cultural dimensions in language development. Pragmatic theories of language acquisition, such as Halliday's (1977), confirm the claim of Vygotsky (1978) and Luria (1976) that language reflects culture. Chomsky's ideas (1957, 1965, 1975) are based on the intuition of native speakers and observation of their performances.

The publication of Syntactic Structures in 1957 and its refinement. Aspects of the Theory of Syntax, in 1965 and subsequent works, provided an awareness of a theory that postulates that humans are born with the capacity to learn language any language. Language is innate and species-specific. Chomsky's grammar portrays the language without the false starts, temporary slips of memory and other "errors" that occur during normal speech performance. "The grammar of a language, as conceived by Chomsky, is an idealized description of the linguistic competence of the native speakers of that language" (Lyons, 1970, p.94). The major criticisms of Chomsky's framework related to the absence of a connection to the learning of communicative and cultural behaviors.

Halliday (1977) views the child as an active agent in creating meaning from his interaction with people and other experiences. He stresses the point that children learn their culture in the process of learning their language. Halliday's link of culture and language follows the views of those psychologists who see a connection between cognitive style and culture. Language, then, is a carrier of cognitive style and culture, and so it follows that a close relationship between the three entities exists.

Bruner (1978), considering the mother's role as crucial demonstrates how mother and infant work together to develop language. In discussing the "Chomskyan revolution," Bruner argues that the idea of a language acquisition device (LAD), as proposed by Chomskyan, is an extreme view in that it does not at all consider meaning. Bruner further states that a child has concepts before it learns to make verbal distinctions, that the child is looking for a way to say something that is known. Function, as well as conceptual knowledge, precedes true language.

In reference to literacy and discourse, James Paul Gee (1989) argues that literacy is much more than reading and writing but, rather, it is part of a larger political entity that he calls a "Discourse." Discourse, in this sense, is construed as something of an "identity kit," that is, ways of "saying-writing-doing-being-valuing-believing," examples of which might be the Discourse of lawyers, the Discourse of Academics, or the Discourse of men. Gee maintains that there are primary Discourses, those learned in the home, and secondary Discourses, which are attached to institutions or groups one might later encounter. He adds that one never learns simply to read or write, but to read and write within some larger Discourse, and therefore with some larger set of values and beliefs. He also argues that all Discourses are not equal in status, that some are socially dominant, thus carry with them social power and access to economic success and some non-dominant.

Delpit (1992) identifies two aspects of Gee's arguments as problematic. First, Delpit states it is Gee's notion that people who have not been born into dominant

Discourses will find it exceedingly difficult, if not impossible, to acquire such a Discourse. Gee argues that Discourses cannot be "overtly" taught, particularly in a classroom, but can be acquired by acculturation in the home or by "apprenticeship" into social practices.

The second aspect of Gee's work that Delpit finds troubling suggests that an individual who is born into one Discourse with one set of values may experience major conflicts when attempting to acquire another Discourse with another set of values. Delpit's point is the impact of Gee's premises on teachers if they were to adopt them. She believes that Gee would not only be perceived by teachers as suggesting the inability of students to acquire a new Discourse but also that they would view the goal of acquiring such a Discourse as questionable at best. Delpit cautions educators by saying that "The sensitive teacher might well conclude that even to try to teach a dominant discourse to students who are members of a non-dominant, oppressed group would be to oppress them further" (p.298).

The Study of Composition

Stalker (1974) views writing as a dialect. Smitherman (1969) and Sternglass (1974) recognize the greater formality of writing. It is the greater formality that gives foundation to the claim that writing is more reflective of competence than is, knowledge of the language, than is speech and, thus, writing provides a valid arena of study for the linguist wishing to assess competence.

Stalker (1974) views writing as an actual dialect of the language. He argues that spoken and written language differ in two ways: in terms of discourse theory, they differ in contextual setting and whole discourse internal organization; and in terms of being variant dialects of the same language, they differ in linguistic features. Stalker illustrates that syntax in spoken English involves greater use of clausal groupings than the written English which emphasizes sentence syntax. He gives several examples such as:

One of the frustrating devices man has invented is a car. Mine, for

example, is a 64 Olds. When I was given this car (it was going to be junked), it had been in a number of accidents. (A college student's theme from *Stalker*, p. 276)

First week we went, we got there early met with Mrs. Smith, Miss Smith discussed we wanted to do discussed how she handled her class...Friday is general relaxation day, review day, although I couldn't see what they were actually reviewing but they played games on Friday, and they played this one game, three students Tom, Dick, and Harry, and she worked with them and Theresa and I played Scrabble with George and Sam. (A graduate student's oral report, from *Stalker*, p. 276)

Whether viewed as a separate dialect or as a separate register, writing is generally recognized as more formal, that is, more structural (sentences rather than "incomplete thought," as the English teacher might prefer clause groupings in lieu of sentences in written work), more "proper grammar" (that is, grammar nearer the writer's idea of what is correct), more formal and greater formality of other aspects of style. Smitherman (1969) and Sternglass (1974) have found that college students recognize the greater formality of writing as opposed to speech.

The belief that writing is more formal than speech focuses on the idea that writing requires a completion of incomplete sentences, and that "ungrammatical" and non-standard grammatical features must be eliminated. Lyons (1970) argues that "the conditions in which the written language is used are different from the conditions in which the spoken language is employed" (p. 14).

African American Language and Composition

Since the subjects for this study focused on all Black students, it was necessary to review the literature on African American language. A few linguists have suggested historical bases for Black language (Dillard, 1972; Stewarts 1970). Wolfram and Fasold (1974), Wolfram and Whiteman (1971), have tended to look only at grammatical and phonological features expressed in spelling intrusions of the limited model of African

American language they examined. But, effective writing cannot be narrowed down to simply looking at grammatical and spelling features.

One investigator, (Linn, 1974), attempts to look at how spoken style is reflected in writing. However, he does not provide sufficient details about the actual manifestation in the writing. The Wolfram and Whiteman (1971) study identifies the limited number of dialect intrusions evidenced by older students, and mentions hypercorrections, a group of features included under the label of transitional features.

Communicative Style

African American Vernacular English

Language is a fundamental site of struggle for post-colonial discourse because the colonial process itself begins in language. The control over language by the imperial centre-whether achieved by displacing native languages, [or] by installing itself as a 'standard' against other variants which are constituted as 'impurities'.. remains the most potent instrument of cultural control (Ashcroft, Griffiths, and Tiffin 283).

And so it is with African American Vernacular English (AAVE), a language whose origins begin with the ancestral homeland of most of today's African Americans, West Africa. Their ancestors would have spoken languages such as Yoruba, Igbo, Hausa, Wolof, Bulu, Akan, Twi, Bamou, and Mandinka. Whatever uncertainties scholars may still harbor regarding the origins of AAVE, it is clear that it began with the contact between West African languages, Sabir, a prominent 15th century Mediterranean pidgin and English. The pidgin that developed had a strong Portuguese input since they introduced it to West Africa in the early 1400's, a couple of centuries before the emergence of English into the region (McCrum et al., 1987).

Many sociolinguists maintain that AAVE is one variety of the African American

Language Varieties which emerged in the New World since the seventeenth century as a result of contact between Africans and Europeans (Mufwene (1993) and Alleyne (1980) cited in Zeigler 1996). Historically, according to Mufwene (1993), these African American Language varieties began as pidgins and creoles in the western coastal regions of Africa when Europeans began trading with Africans. They developed into other creoles in the Atlantic island colonies and the American coastal-sea colonies when Europeans began trading in African laborers (Mufwene 1993).

“The Africans exported into the Americas were not waiting for language and cultural overhauls,” argues Zeigler (1996, p. 11) agreeing with Smitherman (1977) who says, “they did not jump fresh off the boat doing the Bump and speaking white English” . “They all came speaking at least one language that was representative of their communities, be it Igbo, Hausa, or Yoruba; more than likely speaking a second language of a neighboring village, and most likely a third language, an English-based pidgin or creole created from transactions with their English captors or traders, a Language of Wider Communication,” says Zeigler (1996 p.).

Dillard (1992) contends that:

Slaves coming to virtually any part of the East Coast in the eighteenth century are very likely to have known some version of Pidgin English. From the evidence we have, what was spoken in West Africa and at sea was rather similar to what was being used in the American colonies, and not just the south. (65)

Hence, because of this importation of African and African-based languages across the sea into a distant land, exiled from culture and home language, AAVE has evolved

during its history of colonial existence into a language strongly determined by English superstructures while maintaining much in every aspect of African home language and styles of discourse. Zeigler further contends that it is this mixing of the European with the African that has made AAVE and its speakers bear a cultural and lingual identification different from that of other varieties of American English (Zeigler 1996).

Zeigler goes on to note that it is also the colonial existence of AAVE speakers which has contributed to cultural and linguistic differences. Under the assumption that colonial powers control everything within their reach, including the language and culture of their colonized people, it is easy to believe what that African Americans have in the way of language and culture comes from the English colonialists. And so when African Americans are heard speaking differently from White Americans, the tendency to associate speech patterns with those of poor, uneducated whites, at best, or to a “primitive” ungrammatical brew of strange sounds and weak lexical imitations, at worst continues the tradition of ignoring any African roots of African American Vernacular English.

Jackson (1989) records that the chattel servitude of most Africans and their American descendants before the Great Emancipation, their contract servitude afterwards and the indignity and discomfort of the color caste institution throughout separated them socially, politically, economically, and linguistically from other Americans. These factors have contributed to AAVE's postcolonial denigration and stigmatization, even after the end of slavery.

Zeigler compares AAVE's stigmatization to that of postcolonial American English. She points out that American English was itself considered “a mongrel language” even after the American Revolution set it free to determine its own identity. As colonies governed by British rule in economics and politics during the seventeenth and eighteenth centuries, the Americans were also governed by British language and culture. Even after Independence, Nineteenth Century English language purists still

considered any variation from standard British English a barbarism. Needless to say, American English went on to develop in its own way despite the British Colonialists who wanted to maintain linguistic dominance after losing political and economic control. Thus, Zeigler maintains that AAVE has persisted in a way no less developmental than has American English. Zeigler goes on to point out that somehow, people have forgotten the commingling of the many other cultures and languages - Native American indigenous languages, and varieties of Spanish and French among many others - which have affected the American English we know today. Also, the fact that American English was founded in a continent inhabited by humans is also forgotten sometimes. These facts about American English, according to Zeigler, are not easily seen in the pervasive English displacement of native languages, nor are they immediately apparent in the eventual installation of English as pre-eminent to all others.

When the American colonies declared themselves free from British dominance, they installed that same British brand of social, political, and language dominance on the peoples of America. Eventually to be American meant to speak English - to speak it 'correctly' - and to follow American English speech ways. Zeigler notes that European immigrants chose to become 'American' and adopt English as their second and ultimately their first or only language. Even though the conversion to English was essentially for social acceptance and economic advancement, it was a choice nonetheless, with means provided to facilitate that choice.

The non-European forced immigrants, on the other hand could not make such choices. Whether "free" or chattel, the Africans and their descendants in America were bound as a group by laws they did not make, to a language they did not choose, and separated from social acceptance and economic advancement in the wider community. Postcolonial, as well as colonial, America maintained and increased its hold on Black Americans by enacting laws and local codes written especially to control their actions. Increasingly severe, they forbade Blacks from conversing in native African languages,

traveling about freely gathering together, engaging in trade, and from being taught reading and writing. As restrictions escalated and the colonial hold tightened, Black resistance mounted accordingly Blacks created alternative societies and languages to counter them. Black Vernacular language and culture, which have persisted to this day became the source of these alternatives.

Stages In The Evolution Of AAVE

As the material conditions of African Americans changed, so did their self-defined racial and cultural nomenclature. According to Smitherman (1994; a work in progress) indicative of name changes reflect historical developments in the vernacular language which may be outlined in four stages from 1619 to the present. The first stage extends from 1619 to 1700. Blacks called themselves "African" some with specific tribal references and spoke primarily a pidgin English along with their African languages. During this period, the enslaved Africans thought themselves exiled from home with hope of return, and the free or indentured considered themselves temporarily separated from home with a promise of return. Because the number of enslaved Africans imported into the North American colonies grew in increasingly larger numbers - from 20 indentured servants in 1619 to 22,817 enslaved Africans in 1700 - the Black population was constantly being infused with fresh contact with African home folk, home ways and home language.

From 1700 to 1808, Blacks had begun calling themselves "African" and "Colored." "African" identified them with their homeland their nonAmericanness. "Colored," a product of their mixing with European Whites, was a reference to the new ethnicity that had been developed which was both African and European. Here the affects of the colonizer on the colonized can already be counted, for the "colored" - free and chattel - saw themselves as different from their African kin while adopting their African parents' "old home" ways to a new land. By 1808, there were more than one million Blacks in the United States - of these, more than 900,000 were enslaved and

almost 200,000 were free (Bergman 1969). The vernacular languages of the Africans and Coloreds developed from pidgins into creole and decreolized varieties of American English. Creolization occurred because a generation or two of separation and tribal dispersement made the home languages impossible to maintain and because English was the contact language of survival.

The third period, from 1808-1966, is the longest of the four periods of language change that Blacks underwent with the greatest amount of social and political impact on their struggle. Smitherman (1994) observes that "because the status of Blacks remains unsettled, name changes and debates over names reflect our uncertain status and come to the forefront during crises and upheavals in the Black condition." African Americans assigned their own identifying marker to their name, thus making it their own. Hence the origins for naming - the "in the name of" -came from the grass roots, the vernacular sources of the African American culture.

During the period 1808 - 1966, when the catalogue of race names was most complex and unsettled, language was also undergoing intermittent spells of decreolization. African American language patterns drifted toward the mainstream white English when times were good and away from it when circumstances were bad for Blacks.

After 1808, many Blacks persisted in their efforts to make themselves a recognized part of mainstream American society. They saw the acquisition of Standard English through formal education and literacy as the means to make themselves more American. They rejected creole features and deliberately adopted "standard" patterns as the acceptable speech for everyday living. Other Blacks were not convinced that they could ever be, nor that they really wanted to or should be, a part of that American. They used the "standard" English as a weapon in the cause for separation from their oppressors and used vernacular to maintain and strengthen their ethnic identification with their people. Thus a duel between cultures began that continues until today.

Smitherman (1977:10-11) labels this dueling the "push-pull" syndrome, the struggle between convergence with the mainstream and divergence away from it. Goke-Pariola (1996) states that the colonial and postcolonial experience of African American has made it incumbent upon them as a group to use their speech both as a symbol of separate identity and also to reject it in order to claim membership in the dominant group. And with this, he maintains that assimilation into an amorphous "American" identity is virtually impossible. Goke-Pariola discusses the role that the dominant group's quest for power and legitimacy has played in shaping the development and the characterization of AAVE in both the colonial and postcolonial periods. This quest, and the reaction of the dominant African American group, he argues, are responsible for the linguistic paradox in which African Americans have historically found themselves - what to do with the oppressor's language.

Goke-Pariola says that, paradoxically, many African Americans deny the existence, much less the legitimacy of their own community speech in order to integrate with the mainstream society. In this respect, he says, they demonstrate an axiom in the exercise of symbolic violence: the exercise of power through symbolic violence always rests upon a foundation of shared beliefs between the oppressors and the oppressed. Unfortunately, this society finds other reasons to exclude them even after they might have mastered Standard American English

The current period in the evolution of AAVE, 1966 - Present, has been marked by "successes" of the Civil Rights movement of the 1960's that helped to solidify the significance of being Black and expressing themselves as African Americans. During this period, the language tended toward recreolization, the use of older vernacular forms of grammar and vocabulary, forms not shared by the wider community. As Majors (1994) points out when one group of speakers feels the need for secrecy from another, it develops a secret tongue. In this case, African Americans maintained a "rapidly" changing vocabulary unknown to the larger, mainstream culture...Since the day of

slavery, this secrecy has served as a form of cultural defense against exploitation and oppression, constructed out of a combination of language, gesture, body style, and facial expression"

During the 1960's and early 1970's the focus of sociolinguists was on African American Vernacular English (AAVE). The few sociolinguists who examined written compositions tended to focus on dialect interference. A major flaw with most studies of Black English was the failure of linguists to identify and describe the full range of Black English and their use of a model based on a small segment of the Black community, the inner city young male, as the standard model of Black English. Using inner city males as informants, Fasold and Wolfram (1970), present a list of features that constitute AAVE.

These features, basic to AAVE included such items as consonant cluster reduction, absence of final -s markers, double negation, and invariant be. But many of these features, however, are also characteristic of other non-standard dialects of English, features such as consonant cluster reduction in tes' for test. There are a few features, however, found only in Black speakers or in those who are in close contact with Blacks such as, New York Puerto Ricans living in or near Harlem, for example. The exclusively Black features are few: the completive "I done tried hard all I can;" the remote time - "I been had it;" a combination of remote and completive - "I done been had that coat;" "I been done finished my homework" (emphasis changes according to the placement of the two forms); distributive and habitual be - "sometimes he be here and sometimes he don't." "I be writing some good stories" (Wolfram 1970).

The completive, remote time, habitual and distributive be forms can be traced to African verbs that show aspect. Because the aspects shown were not carried in English, English words were adopted to use to express the concepts. The validity of African influences in Black language dates back to Lorenzo Turner, quoted in Taylor (1983), which refuted the claims that Blacks were merely mispronouncing English. In 1949, Turner wrote that he had found approximately 4000 West African Words and survivals in

syntax, inflection, sounds and intonation in the language of coastal Blacks of South Carolina and Georgia. "There are man compound words, one part of which is African and the other English. Sometimes whole African phrases appear in Gullah without change either of meaning or of pronunciation (quoted in Taylor, note 2, p.13). Not all of the research on Black English, however, points to African origins.

In assessing the research of the sixties and seventies, Taylor states:

The major research of the sixties and seventies are as follows: First, there has been a marked improvement in the quality of linguistic and sociolinguistic descriptions of Black English. Second, more detailed data have been reported...Third, the past decade has seen the beginning of serious study of the relationship between Black language and certain educational questions, especially those associated with reading, writing, and the acquisition of standard English. (Taylor, note 2, p. 9)

Blacks in America speak a wide variety of English from bi-dialect to super standard. But the majority of linguists have defined Black English by reference to the features of the non standard vernacular. The implication is that all Blacks use the vernacular or that if there are Blacks who use standard, it is a standard identical in all aspects to "White" standard. Whiteman (1971) argues that little research has been done about the language of middle class Blacks, for example, Taylor reiterates the point by emphasizing that:

Black language consists of the totality of language used in the Black community. It contains many varieties, with difference occurring as a function of such variables as geography, social class, age, sex, amount of education, etc. Further differences emerge as a function of social situations. (p. 16)

Examination of the Writing of Blacks

Writings of African American students are not weighted in significance or assigned value. Zeigler (1996) describes African American English in Language Arts and Composition as "invisible," when the actions, beliefs, and attitudes of a being and the group to which he belongs are not recognized as cultural distinctions, then that group is culturally invisible. She adds that, when the groups language is not recognized as

linguistically sound but as a distorted reflection of another language, then that group is linguistically invisible. Thus, from the world view outside they are insignificant objects, and the invisible is both “incapable of being seen” and inaccessible to view” (Merriam). With very clear cultural lenses, Lis Delpit (1995) acknowledges that the power of these groups and institutions with different world views frequently plays a decisive role in our society:

The world view of those with privileged position are taken as the only reality, while the world views of those less powerful are dismissed as inconsequential. Indeed, in educational institutions of this country, the possibilities for poor people and for people of color to define themselves, to determine the self each should be, involve a power that lies outside of the self. It is others who determine how they should act, how they are to be judged (p.15).

This world view causes cultural and linguistic invisibility to persist among African American children.

Zeigler notes that despite the state and consequences of invisibility, and despite the shadows of a colonial existence, African American people, African American culture, and African American language survive. They survive to create, to invent, to originate, and to develop. Proof of that creative survival lies in AAVE, the Vernacular language of the African American people. Therefore, AAVE is vibrant. A sizable list of attributes are found to be particularly systematic in AAVE, although some evidence of them can be found in contiguous dialects. Testimonies to AAVE’s vibrancy begin in the linguistic records of Melvill Herskovits (1941) and Lorenzo Dow Tuner (1949), and are corroborated in the sociolinguistic research of J. L. Dillard (1972, 1985), William Labov (1972), and Ralph Fasold and Walt Wolfram (1974). Further evidence continues in the current ethnolinguistic studies of Janice Hale-Benson (1982), John Baugh (1983), Salikoko Mufwene (1994), John Rickford (1988) and Geneva Smitherman (1994), among others.

One particular, surviving AAVE historic feature worthy of noting because of its systematic occurrence affects both the morphology (grammar) and the phonology (pronunciation) of language, is the reduction of word-final consonant clusters in the past tense and past participle forms of the regular verb in English. In a word such as *lived/livd*, the consonant cluster, *vd*, simplifies to a single consonant */v/* so that the word *lived* is pronounced */lv/*. Some listeners might dismiss this pronunciation as lazy articulation, but linguists attest to its survival from creole origins. When AAVE speakers write this form, they frequently maintain the cluster-reduction feature in the absence of the *-ed* morpheme. For example, the following sentence

He live_ there a long time ago.

clearly indicates past time in its predication even though the verb *live* does not have the past tense morpheme to indicate past time. This feature is an adherence to the two AAVE Morphophonemic rules to reduce or eliminate functional redundancy (Baugh 92) and to indicate tense or time by context, not with an “-ed” ending (Smitherman 1994, 7).

Recent studies of AAVE speakers (Zeigler 1995) revealed that this consonant cluster simplification feature occurs in the speech and writing of eighteen to twenty two-year-old students in a regional university as well and in that of four to nine year olds in an urban primary school. The primary students produced such sentences as

The Doctor look_ up and said, my goodness a octopus!

This AAVE speaker is still in the early stages of literacy, so an educator might observe that this characteristic will change as the AAVE speaker grows older with more language experience in school. But paralled investigations reveal that this feature occurs also in the speech and writing of older vernacular speakers either trained in or otherwise exposed to a “standard” English dialect. The following statement spoken by a college student in a regional university illustrates that point:

Yes, I went and I talk_ to my teachers.

The morpho - syntactic rules of English require a tense marker on every finite verb within

a clause. If past time is indicated in the context, then past tense markers are required for every finite verb within the same clause - the verb tense consistence, rule. But according to Zeigler, for the AAVE speaker, since one verb in the sentence is marked for past tense, in the word went, AAVE morpho-syntactic rules do not require its occurrence again; thereby reducing redundancy, a rule of creole syntax. This systematic morphological, and syntactic patterning must be ascribed to language coding.

This type of language code affects not only the pronunciation system but the morphosyntactic one as well. So in adherence to the language code, the absence of the past tense marker in speech influences its absence in writing, as illustrated in the following from a college student:

It was never mention_ in his house.

The occurrence of this feature in the speech and writing of early learners and its retention in that of college aged learners can be attributed to their acquisition of language in an AAVE community and to their continuing association with other AAVE speakers.

Also, in the examination of Black writing, Bergen (1976) illustrates that ambiguity can result when the reader is not familiar with the dialect of African American vernacular speakers. An ambiguous sentence, as defined by Bergen, is "one that associates two or more readings or meanings, with one Phonetic String" (p.1). He gives examples of Ambiguous Sentences such as: The deer drink water at dust. In order to ascertain whether such a sentence is singular or plural, Bergen suggests the use of tag questions such as, "Don't they?" to elicit the statement's plurality and, "Don't it?" to test for singularity. When there is a possibility of interpreting written work as either standard or non standard, the instructor will have to try both questions.

Wolfram and Whiteman (1971), report on a study of composition papers of 19 students in a Maryland tenth grade high school class. The study identifies the dialect features that most often interfere in written work at the high school level. Dialect interference occurs when dialect features intrude on standard forms. "When a speaker of

language variety **A**, who attempts to produce language variety **B** deviates from the norms of **B** as a result of his structural familiarity with **A**, we have language interference" (Wolfram and Whiteman, 1971, p. 5). The features identified are:

1. -s markers
 - a. third person singular verb marker omission
-He go
 - b. possessive marker omission - Linda house
 - c. plural marker omission - many boy
2. absence of form be - When you out there...
3. consonant cluster reduction, - ed absence only - Yesterday he walk...
4. hypercorrection - He stay there a wild
5. spelling errors related to phonological differences - hep for help

The study indicated that by the last years of secondary school, students who have dialect interference in writing tend to be limited to a few of the total possible features. An informal survey of English faculty at the University of the District of Columbia identified three of the features as most common; absence of verb - be marker, consonant cluster reduction of -ed verb and verbal marker, and absence of noun plural -s marker. Hypercorrections and dialect-related spelling errors are not found as frequently as the other three features according to this study. The study does not focus on any type of transitional phase in the acquisition of standard; however, it does not intimate such a state in its reference to hypercorrections and in the authors' statement that it is the least stigmatized forms the dialect that still tend to be present at the high school level.

Relationship Between Speech and Writing

Smitherman (1969) addresses the link between speech and writing as she investigates whether non-standard speakers use the identical language features in speech and writing. Her subjects are 16 Black Detroit junior high school students who are

speakers of a non-standard variety of Black English. She finds a significant difference between the oral and written features. In writing, there are significantly more adjectives and subordinate clauses present than in speech. The greater use of descriptive words may be evidenced in Matthews' (1977) argument that Blacks prefer imagery as a conveyor of the message rather than as mere ornament. Smitherman also recognizes different grammatical patterns in speech and in writing. In the spoken language, for example, there is more use of dialect be. So, contrary to assertions by some that nonstandard speakers do not write exactly as they speak.

Style

Many of the correlates of cognitive styles are found in stylistic features of language. Distance, for example, which has been as reflective of an analytic style, is totally lacking in Black communicative style, can be seen to be contrary to academic demands for effective writing.

Style is an important aspect of language use and is often overlooked when linguists examine written language. G. W. Turner (1973) looks at style as "a distinction... between competence and performance [and it] underlies much...linguistic theory...Stylistic Choices...are manifested in the parole description of the nature of choices but described with references to the langue" (p. 14) Bolinger (1975) defines style by stating that style involves a choice of form without a change of message. It involves that, but of course, it is more than that. It includes the motives for the choice and its effects. Often these are impossible to distinguish from the content" (p. 600).

From this definition, one notes that cognitive process has a direct relation to the manifestation of style in language. Global (FD) thinkers tend to have a more imagistic descriptive style than abstract thinkers (FI) who tend to be an analytic descriptive style. Beaugrande (1977) defines a comprehensive generative stylistic as one that provides an interlocking method for describing and teaching, a method that will show not only how topics are found and organized but also how these topics are given grammatical form. He

sees no opposition between the analytic-descriptive method and the generative one in language study since each applies to one phase of a two-sided process of writing. Ullmann (1964) says: "To describe the stylistic resources of a language means...to establish, classify and evaluate its expressive elements" (p.100).

Black Style

The two fundamental features of African Style are image and rhythm. Given individuals will be influenced by their cultural background as well as by their academic training as they write. The preferred stylistic choices of many Blacks are an affect of their cognitive styles which prefer highly imaged writing of the kind that is often discouraged by the majority of society's preference for more unadorned, objective writing.

J. W. Williams (1977) addresses style as it relates to non-standard writers. Williams asserts the need for speakers of different dialects to master the standard written code stylistically. The writer, according to Williams, must learn the "kind of educated style that allows a writer to write not too differently from the style of this essay," (p. 9). Williams states that many dialect speakers lack the motivation to learn standard writing style because they associate it with white middle class values. If dialect speakers do not learn the code, however, they may become a social problem because they cannot fit into the mainstream of society.

Cooper (1978) identifies transitional features in the writing of Black college students. Transitional features are defined as those that may come about as a non-standard language user moves toward the standard language. Cooper (1978) writes:

Every student who is making a transition from nonstandard to standard will not make...hypercorrection, but those who do so, do so often. Here are two examples from UDC students: Both essays were afflicted with problems concerning black people," and "while conversating with Conrad... (pg.)

Another type of hypercorrection takes the form of a grammatical deviation. Basic studies of Black Vernacular Language have identified the absence of the *-s* third person

present tense verb marker as a feature of the dialect of many Black nonstandard speakers. Such an absence follows the West African languages' practice of regularization of verb forms and omission of redundancy. As such students begin to acquire the standard -s ending, some, who also may show absence of other -s marker, become confused. Many learn or already know that final -s is a plural marker for nouns. They also know or learn that final -s is a verb marker...such students may extend the idea of -s plural to the verb.

A third hypercorrection may appear at first to be an error in punctuation. Knowledge of the dialect spoken by some Black students will indeed identify the feature as a hypercorrection. In some Black nonstandard dialects, there is not a marker for possessive. Students who learn that noun possessives are marked with an -s often use the `s as the plural noun marker. Again, the students may not have attended to the fact that `s means possession while -s alone is a plural marker. A few students, even extend the `s to the verb. Some examples are:

Student's can not expect to graduate without mastery of the basics.

The play tell's about complications in love.

The women's are not the main characters in the story. (p. 2)

Cooper also examines the use of imagery and rhythm as stylistic features of the writing of Black students. Following Senghor's premise as elaborated by Matthews, (1977), she selects examples of the use of imagery in the expository writing of students, a use usually discouraged by college instructors. Black students appear to be, in the examples cited, using the image not as ornament but as an affective or connotative carrier of the message. The rhythm seems to come as a natural consequence of the writing.

Cooper notes that student writers often use a personal tone to involve the reader. One paper asked: "Have you ever had the blues?" (Note 10, p.6). Such personalized reader involvement coincides with the African oral tradition in which the audience participates in any recitation and in which audience response is not only desirable but is considered part of the presentation. The tendency of many Black students to use the

second person point of view in expository essays is another manifestation of this personal involvement. For instance: "You might appear to be in love, but there's always something ` make you think or act differently. You can see this point illustrated in the Alice Walker stories" (student paper, 1978).

Smitherman (1973) looks at Black style but in her discussion, she is also concerned with speaking style. Smitherman lists call-response as a basic part of the Black oral tradition. This style is seen most often in the churches where the congregation urges on the pastor, and this feature is one of many that can be traced back to its African roots (Finnegan, 1970). Smitherman also lists features such as spontaneity, rhythm, concreteness and signifying. She does not look at how such features might or do intrude into the writing of their users. Nor does Watkins (1971) look at how speaking style, in the form of the rap, is reflected in writing; but is concerned with the writing of song lyrics, a very specialized situation. Watkins does identify two types of rap: an arrogant, self-assertive style, which he calls the "Ain't I Clean" or "I'm out of sight" attitude; and the begging style, which might be demeaning to typical mainstreams but which is regarded as merely "an act without consequence in terms of personal evaluation in some Black communities which disdain abstract values and accept the contradictions of reality.

According to Labov (1970), contrary to the theory that inner-city Blacks have been verbally deprived, urban Black children receive much verbal stimulation, hear more well-formed statements than middle class children, have the same basic vocabulary, have the same capacity for conceptual learning and use logic just as any other English speaker. Differences, according to Labov, occur in verbosity: middle class language is an elaborated style which can often be "torrid, redundant, bombastic and empty," (p. 164), whereas, working class language is often simple and to the point.

Semantics

An aspect of language that is closely tied to cognition is semantics. There has been limited research in semantic differences for common words. Lands (1976) reports

on three such studies conducted in the early 1970's. Williams and others performed two 1971 studies which showed stronger more favorable meanings for black than white among Blacks. There were numerous differences in connotations of words between Blacks and Whites. For example, house has a highly positive connotation for Blacks, a neutral one for Whites; Blacks see danger/trouble as less negative more impotent, and more inactive than Whites; sympathy is seen as potent and quietly active by Blacks and as neutral and inactive by Whites. In assessing the word choice in student papers, the teacher needs to know just what connotation as well denotation the words have for the students.

Cognitive Styles

Messick (1984) defines cognitive styles as "characteristic self-consistencies in the information processing that develop in congenial ways around personality trends" (p. 61). Cognitive styles are process-oriented individual differences and appear to reflect the close relationship between perceptual-cognitive functioning and certain personality variables (Witrock, 1979). This general definition indicates that cognitive styles will enter into a person's behavior in wide ranges of activities including reading. One dimension of cognitive styles which appears to relate to many aspects of reading behavior is field-dependence/field-independence. The cognitive style dimension. field-dependence/field-independence was originally described by Witkin, (1950) while researching spatial orientation. Subsequently, it has been recognized as one expression of a more general individual-difference dimension. defined at one extreme by a global mode of field approach and at the other extreme by an articulated mode of field approach (Witkin at al..1975).

At one extreme is the field-dependent person who appears to respond to the entire field and is less capable of organizing visual stimuli. At the other extreme is the field-independent person who imposes organization upon disorganized visual stimuli and who is able to locate a sought after component (Witkin, 1977). Both field-dependence and

field-independence are contrasting modes of processing information. Field-independent people rely on internal referents related to structure and prefer impersonal relations as primary guides in information processing. Field-dependent people, on the other hand, are relatively strong in interpersonal competencies, and rely more on external referents related to structure as primary guides in information processing (Witkin, 1977). We should be careful, however, in categorizing people as belonging to one group or the other. Cognitive superiority of field-independent over field-dependent people as stated by Watkin (1977) "lies in the restructuring domain. They are not very different in cognitive tasks which do not have this feature"...and ..." cognitive restructuring is not synonymous with intelligence" (p. 16). Field dependence - independence is apparently related more to how people learn than to how much is learned (Goodenough, 1976). The magnitude and quality of the differences of these two information processing styles suggest that the comprehension of narrative and expository prose would be experienced in varied ways.

The thrust of the research on cognitive style by Witkin and colleagues emerged from the research done on individual differences in perceptual and intellectual functioning. This research initiated with the studies of the perception of the upright in the rod-and-frame test (BFT), body-adjustment test (BAT), and rotating room test (RRT). In each of these tests, subjects differed in the magnitude to which they used the external visual field or the body itself as the main referent for locating the upright. They were also self consistent across tests in their disposition to rely primarily on the one referent or on the other. These contrasting tendencies were designated field dependent and field independent (Witkin et al. , 1979).

Much later, the manner of locating the upright was established to be related to the relative ease of separating part of an organized field from the field as a whole, as in the Embedded Figures Test (EFT), in which the task is to locate a simple figure within a more complex design (Witkins et al., 1954/1972). The requirement of separating the item from its embedding context in this task on the EFT, looked similar to the task of keeping

the rod or the body apart from the surrounding field in the RFT, BAT, and RRT. Because of this similarity, the concept of field-dependence-independence was redefined as a disembedding ability in perception (Witkin *et al.*, 1979).

Subsequently, this disembedding ability in perception was related to the disembedding ability in intellectual activities, and disembedding ability in both domains was found to be related to structuring competence in both domains. The ability to analyze and structure fields is to show an articulated cognitive functioning as a characteristic approach to the field. The approach to follow the field as given is global, and involves less intervention of mediators, such as analysis and structuring. The articulate-global concept is applicable to the processing of information both from an immediately present stimulus configuration as in perception. or from symbolic material, as in intellectual functioning, i.e., thinking and problem solving. This greatly enlarged individual-differences dimension conceived as an articulated versus global field approach dimension, that extends across both perceptual and intellectual activities, was designated as "cognitive style". Thus, cognitive styles are the characteristic, self-consistent modes of functioning which individuals show in their perceptual and intellectual activities (Witkin *et al.*, 1971; Witkins *et al.* , 1977; Witkin *et al.* , 1979).

The essential characteristics of field-independent and field-dependent cognitive styles in general as proposed by Witkin (1977, p. 17) are as follow:

1. They represent process rather than content variables;, that is, they refer to the "how" rather than to the "what" of behavior.
2. People's standing on the field-dependence-independence cognitive-style dimension is stable over time.
3. The involvement of both cognitive and social characteristics of the person makes the dimension a very pervasive one.
4. Since these characteristics are inversely related, the field-dependence-independence-dimension is bipolar with regard to level; that is, it has no definitive high or low end.

5. Cognitive styles are value-neutral.

Through years of research and observation (Goodenough, 1976; Witkin, 1977; Witkin *et al.*, 1977) a number of characteristics of field-dependent and field-independent cognitive styles have been determined. Many of those characteristics which have an impact upon learning are listed in Appendix A, Table 1:

This characterization of differences between field-dependent and field-independent cognitive styles has important implications for learning and cognitive processes. A wide range of perceptual and problem-solving dimensions require skills in cognitive restructuring. Concept attainment is a restructuring dimension that has been linked to field-dependence-independence in terms of the approaches to hypothesis-testing and the effects of cue salience in such learning and cognitive processes as hypothesis testing, recall and recognition, stimulus generalization, and transfer of training. In a typical concept-attainment problem, in a class of attributes, the individual attempts to distinguish between exemplars and nonexemplars to form hypotheses about the definition of the class of attributes to form hypotheses about the definition of the class concept. These hypotheses can be observed by a variety of technique and it is thus possible to determine whether or not a hypothesis-testing approach is used by an individual. Problems of this sort may require perceptual analysis of the stimulus complex into its attribute components, a task that is more easily met by field-independent subjects than by field-dependent subjects (Dickstein, 1968; Goodenough, 1976; Witkin, 1978; Witkin *et al.*, 1977).

With respect to the approaches to hypothesis-testing, participant approach to concept attainment for information acquisition, reflects their greater structuring ability. In contrast, field-dependent people are more likely to adopt a more passive, intuitive, spectator approach to concept attainment for information acquisition (Goodenough, 1976; Nebelkopf & Dreyer, 1973; Witkin, 1978; Witkin *et al.*, 1977).

Two hypothesis-testing strategies, called wholist and partist, have been identified

in concept-attainment problems. In the wholist strategy, the first exemplar produces the hypothesis that the values present for all attributes are relevant for the concept definition. The attributes that change in value are eliminated from the revised hypothesis when a second exemplar is found. This process continues until the correct hypothesis is found. On the other hand, the partist strategy utilizes only some of the attributes in constructing the initial hypothesis. If this hypothesis is invalidated by the next exemplar, a new hypothesis is formulated which includes the common values of both exemplars.

The results of this research confirmed the existence of field dependent and field independent or relations and analytic cognitive styles. Cohen (1969) states that "two conceptual styles have been identified and demonstrated reliably-relational

Characteristic Differences in Field Dependence/Independence

Field Dependent	Field Independent
global	analytic
accepts structure	generates structure
externally directed	attentive to social cues
conflict resolve	philosophical, cognitive
sociable and gregarious	individualistic
affiliation oriented	distant in social relations
interpersonal	intrapersonal
needs friendship	reserved, aloof
conventional, traditional	experimental
influenced by the salient feature	generates own hypotheses
factually oriented	conceptually oriented
acquires unrelated facts	acquires information to fit conceptual scheme
accepts ideas as presented	represents concepts through analysis
influenced by format/structure	less affected by format/structure
gets feelings/decisions from others	impersonal orientation

and analytic. Relational and analytic conceptual styles were found to be associated with shared-function and formal primary-group participation, respectively, as socialization settings" (p. 842). This research helps to clarify and confirm the existence of different

ways of thinking.

African American Cognitive Styles

The literature on African American cognitive styles indicate that they are likely to utilize field dependent cognitive styles. Initially, some scholars have offered broad generalizations about the cognitive styles of African Americans. White (1970) suggests that the psychological orientation to reality of African Americans is distinct from that of whites. Specifically, he feels that this orientation is more affective while that of whites is more objective. According to White (1970), "people who grow up in the black community tend to be much more intuitive in terms of their response to signs and gestures than they are in relating to concrete syntax" (p. 56). In addition, Cooper (1980) notes that although "there is a continuum of style, some individuals and cultural groups cluster at one end or another of this continuum. Mexican-Americans and Black Americans are two groups that tend to have large numbers of holistic thinkers" (p. 45). Hale-Benson (1982) goes so far as to claim that African American culture influences the development of holistic or field dependent cognitive styles. Specifically, Hale-Benson (1982) argues that "Afro-Americans participate in a culture that has its roots in West Africa. This culture gives rise to distinctive modes of child-rearing among African-American people. As a result, Black children may have distinctive learning and expressive styles that can be observed in their play behavior" (p. 5). Hilliard (1976) characterizes African American cognitive style in the following terms:

1. Afro-American people tend to prefer to respond to and with "gestalts" rather than to or with atomistic things. Enough particulars are tolerated to get a general sense of things. There is an impatience with unnecessary specifics. Sometimes it seems that the predominant pattern for mainstream America is the preoccupation with particulars

along with a concomitant loss of a sense of the whole. There is the belief that anything can be divided and subdivided into minute pieces and that these pieces add up to a whole.

2. Afro-American people tend to prefer inferential reasoning to deductive or inductive reasoning.
3. Afro-American people tend to prefer approximations over accuracy to "fifty decimal places."
4. Afro-American people tend to prefer a focus on people and their activities rather than things. The choice by so many students of the helping professions such as teaching, psychology, social work, and so forth cannot be explained by job availability or ease of curriculum.
5. Afro-American people have a keen sense of justice and are quick to analyze and perceive injustice.
6. Afro-American people tend to lean toward altruism, a concern for one's fellow man.
7. Afro-American people tend to prefer novelty and freedom. Witness the development of improvisations in music, styles in clothing, and so forth.
8. Afro-American people in general tend not to be "word" dependent. This is to say there is a tendency to favor non-verbal as well as verbal communications. Words may be used as much to set a mood as to convey specific data. (pp. 38-39)

Although extremely broad, these scholars' generalizations serve as a basic working statement about African American cognition upon which a more elaborate explanation may be established.

In an article in which she reviews research on African American cognitive styles, Shade (1982) concludes that a "pattern seems to emerge that suggests that Afro-Americans have a field-dependent cognitive style" (p. 227). Several researchers have tested the hypothesis that African Americans tend to utilize field dependent cognitive styles. Ramirez and Price-Williams (1974) studies 180 fourth-grade children to determine whether Mexican American and African American students scored in a significantly more field dependent direction than did the Anglo children. Ramirez and

Price-Williams (1974) concluded that "members of groups which emphasize respect for family and religious authority and group identity, and which are characterized by shared-function family and friendship groups, tend to be field-dependent in cognitive style" (p. 217).

Perney (1976) studied field dependence-independence among suburban African American and white sixth-grade students. In this study, 40 sixth-grade students equally divided by race and sex were administered the Embedded Figures Test. Perney (1976) found that "there were significant differences between white and black children and between girls and boys in their responses to the Embedded-figures Test. However, of the four groups studied, the one accounting for most of the differences in both cases was the Negro girls" (p. 978). Perney (1976) hypothesized that African American females may be raised in a culture that facilitates the development of field dependent cognitive styles.

In addition, Jones (1978) investigated the meaning of black and white personality differences. In this study, Jones (1978) administered items obtained from the MMPI, California Psychological Inventory, and Embedded Figures Test to a group of 226 black and white junior college students. These psychological inventories were designed to test the personality characteristics of the respondents. Jones (1978) concluded that "further evidence for Black-White differences in personality processes is the greater field-dependence of Black subjects. The disparity in field-dependence-independence between the two races in this study surpasses the well established and predictable finding of sex differences in cognitive style" (p. 250).

As noted previously, research on cognitive styles indicates that field dependent individuals tend to be much more interpersonally oriented than field independent individuals. Witkin (1978) argues that "field-dependent people have what may be characterized, overall, as an interpersonal orientation" (p. 20). In addition, Shade (1982) claims that field dependent individuals "seem to demonstrate a preference for interpersonal relationships. This preference is manifested through a strong interest in

other people, a need and desire to be physically close to people, a preference for social situations, and attentiveness to social cues" (p. 229). Research on African Americans indicates that they also tend to be interpersonally oriented. According to Madhere (1989), "when it comes to the empathic process, the leading tendency among Blacks seems to be interactive, not attributive. In other words, Blacks form their impressions mainly in terms of the elements present in a situation. The interactive modality affords them great flexibility in managing social encounters" (p. 200). Shade (1982) states further that "Afro-Americans seem to develop a unique affective or personal orientation that manifests itself in attention to social cues, subjective meanings attached to words, preference for social distance, and sustained use of nonverbal communication" (p. 221).

In a similar vein, Shade, and Edwards (1987) claim "that Afro-American children, because of the urban environment and social milieu in which they live and because of the various mediating experiences to which they are exposed, develop a preference for the social rather than the inanimate aspects of their environment which influence their school behavior" (p. 89). In a study of differences in social perceptions, Szalay and Bryson (1973) found that words representing themes of racial integration, individual needs, and social problems were perceived as having higher value by African Americans. White European Americans preferred word domains representing various "isms," national loyalty, and health concerns.

The response variation represents differences in attached affective meaning. In a study in which groups were compared based on their attentiveness to cues in the faces of other individuals, Hirschber, Jones, and Haggerty (1978) found that African Americans focus on very different cues than European Americans and subsequently develop different recognition patterns. These authors concluded that the African American subjects paid much more attention to the affective characteristics of the pictures of male faces than to the physical characteristics. Other studies seem to indicate that African Americans detect different social reactions and nuances. A study done by Hill and Fox (1973) of a military

situation found that African American and European American squad leaders had entirely different perceptions about the climate and interrelationships of the people in their squads. Hill and Fox (1973) concluded that "white squad leaders gave proportionally more reprimands to their white as compared to black subordinates. They also gave their black subordinates better performance ratings and indicated that white as contrasted with black squad members were more uncertain than expected" (p. 685).

The research presented in this section does not suggest that African Americans tend to employ field dependent cognitive styles (Cooper, 1980; Hale-Benson, 1982; Hilliard, 1976; Jones, 1978; Perney, 1976; Ramirez & Price-Williams, 1974; Shade, 1982). Specifically researchers have indicated that African Americans are likely to utilize an interpersonal or effective cognitive orientation (Hill & Fox, 1973; Hirschberg et al., 1978; Madhere, 1989; Shade, 1982; Shade & Edwards, 1987; Szalay & Bryson, 1973). In the next section of this thesis, literature relating to the correlation between culture and cognition is explored.

FD and FI Styles and the Academic Setting

The implications of FD and FI style for persons in an academic setting are presented by Witkin, et al. (1977), Cohen (1969), Ramirez & Castaneda (1974). Because of the importance of these researchers to the present study, their work is reviewed in some detail here.

Witkin et al. (1977) examine the potential benefits of applying a cognitive style approach to the following areas of education: how students learn; how teachers teach; how teachers and students interact; how students make educational and vocational choices, and how they perform in the areas of their choices. Witkin et al. (1977) draw upon the research of others in addition to their own work in the field. They point out that FD persons are better at learning social material.

Studies by other researchers such as Ruble and Nakamura (1972) in which the child subjects were given three concept-attainment problems and asked to identify a

particular figure, are cited to show evidence that FD thinkers learn social material well. In the Ruble and Nakamura study, a redundant social cue was added to one picture, a social cue that alone was relevant to the second picture and no social cue to the third picture. FD children did better than FI children on the second problem. Other findings of value to educators are that FI children learn more than FD children under conditions of intrinsic motivation, but the difference disappears when external rewards are in the form of material items or in the form of praise. FD persons, however, are more affected by criticism than FI persons. Criticism, in fact, has a strong effect on FD persons. In addition, FI people make more use of mediators such as analyzing and structuring. Frequently, in an academic situation, the material to be learned lacks clear inherent structure, therefore, FD people have more difficulty in learning because they have difficulty with unstructured material. The authors also report on teaching styles related to cognitive styles and on how these styles affect interaction.

As for information on vocational and educational areas, the authors present a table of choices within fields which demonstrate the differences. FI and FD persons prefer different types of work and study; for instance, clinical psychology as a career would probably be of interest to someone more at the FD end of the continuum while an FI person also interested in psychology would probably prefer experimental psychology. As far as achievement in various areas is concerned, studies show that FI students perform better in mathematics, sciences, engineering and architecture than FD students. The authors note that there has not been a real examination of the expected relation between field dependence and better performance in educational domains requiring a social orientation.

Cohen (1969, p. 828) argues that the two cognitive styles, which she calls relational and analytic, are mutually incompatible, and she discusses the difficulty that the FD thinker has in the school setting. The school environment, she points out, requires an FI style, and, therefore, FD pupils make use of a cognitive system that places them in

"cultural conflict" with the school. Cohen sees conflict for the field dependent thinker in all aspects of the school setting:

Not only test criteria but also the overall ideology and learning environment of the school embody requirements for many social and psychological correlates of the analytic cool, impersonal, outer-centered approach to reality organization. Analytic correlates can also be found in the requirements that the pupil learn to sit increasingly long periods of time, to concentrate alone on impersonal learning stimuli, and to observe and value organized time-allotment schedules....

So discrepant are the analytic and relational frames of reference that a person whose preferred style of cognitive organization is emphatically relational is unlikely to be rewarded in the school setting either socially or by grades, regardless of his native abilities and even if his information repertoire and background or experience are adequate...both the cognitive characteristics of this style and its sociobehavioral correlates have been considered deviant and disruptive in the analytically oriented learning environment of the school. (p. 835)

One of the most useful features of Cohen's work is her taxonomy of FD and FI behavioral features. Included in the taxonomy are several groups of language behavior. This language behavior is an intrinsic part of the cognitive style and is, therefore, not dependent upon situation or other externals. It is simply that FD and FI style is exhibited in the language. Some of the language differences Cohen categorizes for FI and FD thinkers follow. FI thinkers use analytic abstraction, identify formal meanings for words, use many synonyms, rarely use euphemisms and use many forms for generalization and comparison. Cohen also notes that FI persons make use of an elaborated code and grammatically complex syntax. Taken with Labov's work (1970, 1972) which identifies the elaborated code with the middle class and with work of those like Luria (1976) who relates cognitive style to culture, one sees the historical development of the society: middle class societies are more technologically advanced than the lower classes. FD thinkers, on the other hand, use descriptive abstraction, see word meanings as specific to certain contexts (e.g., money=green, bundle), use many colorful and idiomatic expressions, evidence a low level of generality, use few synonyms, use many concrete and tactile symbols, use euphemisms and reverse euphemisms and make use of a restricted, grammatically simple syntax. The features identified for the FD person

correlate to a great extent with Matthews' (1977) description of Black language.

Others for whom the relationship between cognitive styles and school performance has been a concern are Ramirez and Castaneda (1974). They prefer to use the term "field sensitive" because of the idea that some may interpret "dependent" to refer to all aspects of a person's lifestyle. Their use of this term, rather than their reasons for its preference, is indicative of the defensiveness with which they report their feelings. Because cognitive style is so closely tied to culture, the suggestion that one's cognitive mode is not the one preferred by the academic world also suggests that one's culture is "not preferred."

One of the major contributions of the Ramirez and Castaneda (1974) work is its identification of behavior related to the two conceptual modes in the classroom setting. For instance, field dependent persons like to work with others to achieve a common goal; like to assist others; are sensitive to the feeling, and opinions of other; seek guidance and demonstration from their teachers, and seek rewards that strengthen the pupil-teacher relationship. Field independent persons, on the other hand, prefer working individually; like to compete and gain individual recognition; are task oriented and inattentive to social environment when working; like to try new ideas and new tasks without the teacher's direction; are impatient to begin tasks and like to finish work first; seek nonsocial rewards, and generally limit interactions with the teacher to the task at hand.

Cognitive and Linguistic Assumptions in Language and Composition

Some studies in language and composition have cognitive and linguistic deficit assumptions undergirding research methods and results. Bereiter and Engleman (1966), for example, evaluated the language of African American children as being deficient in cognitive skills because they were illogical and could not express negation. Thomas Farrell (1983), in a similar misapplication, describes the characteristics of oral based cultures, which applies to the background of some African American students, as consisting of:

- (1) a tendency to rely on formula expression resulting in the use of expressions such as proverbs, adages, maxims (30);
- (2) metrical sound effects such as those produced in jive, rap, shucking, and playing the dozens that translated into redundance, repetition, alliteration, clichés and stock expressions (32); and
- (3) reasoning that is additive and repetitive because of reliance on these expressions (33).

Farrell believes that African American students carry a residual form of primary oral culture that results in writing (actually critical thinking ability) based on faulty reasoning that is additive and repetitive because of reliance on familiar expressions and metrical sound effects.

Likewise, Andrea Lundsford (1987) offers her students' responses to her comic strip assignment (that requires students to choose one of the major characters and infer the basic values of that character) as possible proof that her basic writers have problems drawing inferences or forming concepts based on what they read. She reports that her students "have not attained the level of cognitive development which would allow them to form abstractions of conceptions" and that "typical basic writers find it almost impossible to articulate anything about the values of characters unlike themselves" (499).

An addition to these categories of language and composition research is the body of research on dialect interference that currently exists. According to these studies "the surface features of the spoken dialects of some native speakers of English interfere with or inhibit, the production, in writing of correct forms of the accepted orthography (Standard American English)" (Hartwell 1980:100). However, in subsequent research, Daniel Morrow's "Dialect Interference in Writing: Another Critical View" (1985) particularly reveals many of the flawed assumptions and imprecise research procedures of some dialect interference studies. The recommendation that dialect interference researchers use speech rather than race as a selection of criteria and the admission of the

difficulty of precise identification of AAVE users is acknowledged (174).

Smitherman (1988) also observes the ethnocentric tendencies of researchers. She states: "The reappearance of linguistic - cognitive deficit theory may be seen in some of the scholarship emanating from the literacy movement and from composition theorists" (165). Smitherman identifies African American rhetorical qualities and modes of discourse. The rhetorical qualities include exaggerated language or high talk, mimicry, proverbial statements and aphoristic phrasing, punning and plays on words, spontaneity and improvisation, image-making and metaphor, braggadocio, indirection (circumlocution, suggestiveness) (94). The modes of discourse include call and response, signification, tonal semantics, and narrative sequencing (103).

Fortunately, the approaches and assumptions of the deficit body of research are implicitly challenged by the more expansive approaches of Kenneth Bruffee and Patricia Bizzell.

Bruffee (1986) discusses cognitive development as a social construct. He points out that terms such as "cognitive development," "conceptual framework," "intellectual development," and "higher order reasoning" are social constructs that simply represent the language of a particular community of knowledgeable peers (778).

Bizzell (1987) contends that there are multiple literacies which have different but equally advanced cognitive abilities associated with each. She emphasizes Gardner's (1983) description of seven domains of intelligence which include linguistic, logical - mathematical, musical, spatial, bodily - kinesthetic, intrapersonal (self knowledge), and Interpersonal (knowledge of others).

Reflections of Cognitive Style in Writing

Although Odell (1977) does not write about FD/FI cognitive styles, his listing of linguistic cues for certain intellectual processes are of immeasurable value to the examiner of cognitive style in writing because many of the features that Odell studied are related to FI cognitive style. Odell agrees with those who argue that "if students are to

improve their writing, they will need to increase their conscious use of certain cognitive and affective processes during the prewriting stage of composition" (p. 107). Odell identifies the linguistic cues to the processes he deems necessary to effective writing. For example, he states that sentences with a linking verb joining a predicate nominative show use of classification because one of the noun phrases (NP), subject or predicate nominative, labels the other, thus suggesting a more general class of which the second NP is an example.

Odell defines classification as identification of similarities between people, actions, feelings and ideas. He states:

We have to see how people, actions, feelings, or ideas can be labeled or compared with other things...Semanticists have pointed out how labeling influences thought. Saying "I am a loser" is quite different from saying "I lost the last two matches I played." And the difference is not, as S. I. Hayakawa notes, merely a matter of semantics (1972). The second statement comments only on the past. The first statement comments on the past and makes a prediction...about the future...The influence of labeling...appears dramatically in people's efforts to solve problems...labeling is not just a matter of semantics; it is a fundamental part of our thinking. (pp. 113, 115-166)

Another of Odell's intellectual processes for writing is contrast. Odell's definition of contrast in writing is knowing what an item...is not, seeing how it differs from other items. Contrast is operating when we make distinctions, when we have a sense of incongruity, or when we are aware of some disparity" (p. 111). The linguistic cues to use of contrast are in the forms of connectors like but and on the other hand, comparative and superlative forms like more/most, and negatives and negative affixes like not and non-. Some individual words like difference point to contrast.

Other processes listed by Odell (1977) are: change; physical context; and sequence, including time sequence and logical sequence. Odell's categories were chosen from the work of the linguist Kenneth Pike, but Odell has expanded upon Pike's work. Although Odell lists cues, he cautions that meaning must be the final determinant in placing a linguistic feature in a category. The method has been validated: "When scorers were given linguistic cues in context, I found...that scorers, working independently, could

achieve 88% agreement in identifying the intellectual strategies an essayist was using" (p. 116). Odell is one of the few to apply examination of cognitive processes to evaluation of writing.

Cognitive Style and Culture

As noted, preferences for a given mode of cognition are probably culturally determined (Vygotsky, 1978; Luria, 1976). Deregowski (1974) shows that there are cultural differences in pictorial perception. The way pictorial information is interpreted by people of various cultures illustrates these differences. Deregowski refers to studies by Hudson and others which demonstrate the wide differences in perception among peoples of different cultural backgrounds. This information has implications for teachers. It demonstrates that a given method on presentation of materials or information may not be perceived by every student in the way the teacher expects or intends it to be. Hudson, testing African subjects from a large number of different ethnic groups on picture perception. Africans do not readily perceive depth in pictures. Hudson's test consisted of a group of pictures containing various combinations of depth cues such as: familiar size, which dictates that the larger of two known objects will be drawn much smaller when it is supposed to be farther away; overlap, which dictates that portions of nearer objects will overlap farther ones; perspective, which dictates the convergence of lines known to be parallel to suggest distance. Subjects were shown one picture at a time and asked such questions as: "What is the man doing?," "What is closer?" If the subject does not take the depth cue into account, he is said to have two-dimensional perception. Both children and adults of the African subjects, who are drawn from a variety of ethnic and linguistic groups, were unable to perceive depth, and this phenomenon varied in extent but persisted through most educational and social levels. Africans are among those - North American Indians and others, for instance - who prefer flat split drawings. For example, when African children and adults are shown two pictures of an elephant, one like a photograph and the other a top view of an elephant with its legs unnaturally split to the

sides, were asked which picture they preferred, all but one person preferred the split elephant, and that person said the elephant was "jumping dangerously."

Matthews has done much of the specific study of Black cognitive style. He sees this style reflected in a preference for the use of the concrete image and in a wholistic approach to language, a description that fits the idea of field dependency. Matthews' research (1977, Note 7, 8, 9) has concerned identification and description of the symbolic image in the works of Black scholars, literary figures, and scientists. He is one of the few researchers who has focused upon Black writing style. He goes a step beyond most linguistic studies in that he links the extensive use of imagery to the cognitive process preferred by Blacks. The image is used to relay the message, not as a decorative addition to the message. This image is one that grows out of the Black cultural experience and is often expressed in metaphorical constructions but may also be found in copious use of adjectives and adverbs.

In any form, the image is more pervasive in Black writing than in general Western standard writing, which is based on the Aristotlian idea discussed in Rhetorica, that to be effective rhetorically, one must limit the use of the metaphor to its more proper place in poetry rather than use it in prose. Matthews also points out that the use of the image is different for Blacks. Again, traditional Western use views metaphor as a mere stylistic device and not a primary carrier of the content. Matthews' ideas are drawn in part from Sengho (Note 6) who names image and rhythm as the two fundamental features of Black style. Matthews calls the Black method visual thinking (this description applies to the FD cognitive style) as opposed to analytic thinking. However, Matthews objects to the labeling of the Western mode as "analytic," for he sees the Black method as also analytic in nature, though using a different kind of analysis. He points out that there is no dichotomy between metaphor (imagery which is used extensively by Blacks) and logic. The preference to thinking in images that have concrete relationships to the cultural experience is developed and sustained by cultural demands and expectations. It is not

that Blacks cannot use other cognitive processes but rather that the culture reinforces the imagistic thought pattern.

Of interest because of the cultural connections to cognitive style is a 1973 study done by Lloyd and Easton (1977) on Yoruba children. The 1973 study followed a 1968 study of the environmental factors affecting IQ performance as educated and traditionally-raised Yoruba children matured. The differential in the intellectual performance increases with the age among the elite (educated) with elite superiority becoming more marked. The study suggests the need for further research on sex differences in stability of intelligence test scores as there are indications that "only predictions based on the scores for female elite and OJE (traditionally raised) children differ significantly from a zero and account for about 30% of the original variance...either girls are less vulnerable to environmental influences or...the earlier maturation of girls lends to greater stability" (p. 15). It is also possible that "differences in the socialization of males and females...affect intellectual development." The author sees sex differences as interaction between biological and social factors: "Whereas the effects of the elite advantage are specifiable in terms of varied experience...the nature of actors producing a sex difference in predictability are less well understood" (p. 15).

Cognitive Style and Sex

Field dependency is, as has been demonstrated, largely culturally determined. In addition to ethnic differences, sex differences have been identified in white majority groups of Western societies. Women in such groups tend to be slightly more field dependent than are men. Given that field dependency develops in those who lead a more practical life, this sex difference in cognitive style is understandable. Sex differences are uncommon in mobile, hunting societies and are prevalent in sedentary, agricultural societies. Women's role, in spite of the current women's rights movement, continues to be viewed as economically less important. Witkin, et al. (1977) see a parallel between women's economic role and field dependency. Such a parallel results probably because

women have been forced into concern with more practical, everyday aspects of survival like the peasants tested in the 1920's by Luria (1976) and the Mexican-American tested by Ramirez and Castaneda (1974). Women have not only been confined to less prestigious occupational positions, but, as Helm (1974) points out, many states in the United States still have laws, based on the common law, which view a wife as property of her husband. As a case in point, in some states, any money a woman earns belongs not to her but to her husband. Women then have been forced by their socio-economic climate, in many cases, to work with others toward a common goal, to help others, to be sensitive to the opinions and feelings of others, and to seek rewards that strengthen the relationship with others.

Ruble and Nakamura (1972) also look at sex differences in cognition. They examined how task-oriented children and socially-oriented children (FI and FD) might perform differently on two games according to relevant cues given by an experimenter. Sex, as well as FI or FD style, was chosen as an independent variable. The expectation was that FD children and girls would be less task-oriented and more responsive to social cues than FI children and boys. The expectations were supported as regards cognitive style but not supported in relation to sex differences. Implications are that FD persons may be more effective in tasks or situations that involve relevant social cues and reinforcers (substantiated by Witkin, et al. 1977); also that a child's glances away from a task might represent help seeking rather than inattentiveness and, thus, indicate an optimum moment for teaching.

Research on sex differences and cognitive style, as illustrated in the works cited above, does not yet clearly indicate a strong connection between cognitive style and sex. More investigation needs to be done in this area.

Chapter III

METHODOLOGY

Research Design

This study was centered upon comparisons among ninth grade students who differed in terms of cognitive style. Cognitive style is a natural characteristic, self consistent modes of functioning which individuals show in their perceptual and intellectual activities. The field-dependence-independence dimension of cognitive style is a continuum, with field-independent end characterized by a more global, undifferentiated approach and the field-dependent end by a more articulated, differentiated approach to the processing of information both perceptually and intellectually (Witkin, et al., 1971). A natural independent variable is an attribute or characteristic that occurs naturally. Since cognitive style is an attribute or characteristic that occurs naturally, it was studied by systematic observations rather than experiments, since a natural independent variable is only observed - not manipulated.

The research design selected for this study was ex post facto or causal comparative in nature. This decision was determined by the fact that the variable under study was ninth grade students' Cognitive Style - a natural independent variable. The purpose of ex-post-facto or causal comparative research is to investigate whether one or more pre-existing conditions, characteristics or attributes possibly have caused subsequent behavior differences in a group of subjects. In an ex post facto research, there is no control of conditions by manipulation of the natural independent variable, because the cause has already occurred prior to the initiation of the study. Stated differently, the researcher looks to conditions that already exist and then collects data to investigate the relationship of these varying conditions to subsequent behavior (Borg & Gall, 1983; Campbell and Stanley, 1963; McMillan and Schumacher, 1984).

Ex post facto designs are sometimes confused with experimental/quasi-experimental and correlational research designs. Confusion between Ex post facto

designs with experimental, and quasi-experimental research designs, exist because all three types of research designs have some common characteristics; a similar purpose, to determine cause-effect relationships; group comparisons; and the use of similar statistical analyses and vocabulary in describing the results. In experimental and quasi-experimental studies, however, there is deliberate control of the effect of some conditions by manipulation of the independent variable, while in ex post facto research, there is no manipulation of conditions because the causes have already occurred before the study is initiated (McMillan and Schumacher, 1984).

The confusion of Ex post facto designs with correlational research, arises because both involve no manipulation and there are similar limitations in interpreting the results. Ex post facto designs attempt after all, to identify casual relationships while correlational research does not. Ex post facto designs also ordinarily involve two or more groups that are compared, while correlational studies use one group and two or more observations on each member of the group (McMillan and Schumacher, 1984).

In interpreting results of ex post facto research it must be noted that cause-and-effect statements can only be made carefully. If a difference is found between groups, it does not always mean that the independent variable(s) had a causative effect on the dependent variable(s). There may be cause-and-effect relationships, but this depends on the selection of homogeneous groups upon all important variables, and by the confidence that other credible rival hypotheses can be ruled out (Borg & Gall, 1983; McMillan and Schumacher, 1984).

This study used the ex post facto research design to determine whether differences in cognitive style between ninth grade students (the natural independent variable) had resulted in observed behavior differences (the dependent variables) such as written composition.

The Group Embedded Figures test (GEFT) by Witkin, Otterman, Roskin and Karp (1971) will provide the measure for cognitive style. The rationale for using the GEFT is

that it is compatible with contemporary cognitive style theory, and it has extensive research application.

The goals and objectives of the writing comprehension of the Michigan Educational Assessment Program (MEAP) Eighth Grade Writing Test were adopted by the Michigan State Board of Education in 1987 and first administered in 1995 as an attempt to measure written composition. The rationale for using the MEAP Eighth Grade Writing Test is its compatibility with current theory and research on Writing. The test items of the MEAP Eighth Grade Writing Test are written to reflect the writing process that are consistent with the process paradigm of writing that has emerged during the last several years: writing is both a way of thinking and communicating as well as a mode of learning in all curricular areas. It can be a means of self discovery, of finding out what we believe and know (Michigan State Board of Education, 1985).

Tests and Measures

Group Embedded Figure Test (GEFT)

The Group Embedded Figures Test (GEFT) by Witkins, Ottoman, Raskin and Karp (1971) provided the measures of cognitive style, those "characteristic, self-consistent modes of functioning with which individuals show their perceptual and intellectual activities" (p. 3). The rationale for using the GEFT is that it is compatible with contemporary cognitive style theory, and it has extensive research application.

The GEFT was designed to provide an adaptation of the original individually administered Embedded Figures Test (EFT) which would make possible group testing. Scores for many individuals may be obtained in a single twenty-minute testing session with the GEFT. The GEFT is a perceptual test modeled as closely as possible to its parent form, the EFT with respect to manner of presentation and format. The GEFT was created to measure perceptual orientation of person ten years of age and older. A separate form of the EFT, the Children Embedded Figures Test (GEFT) is also available for young children (Witkin, *et al.*, 1971).

The GEFT consists of a test booklet which presents twenty-five complex test figures and two sample figures. Eight simple figures are presented on the back cover of the booklet identified with a capital letter. There are three sections to the test. The First Section, contains seven simple forms and is for practice, the Second Section and Third Section, each contains nine, more difficult forms, seventeen of these are from EFT. The time limits allowed to complete the task are three; two minutes for the First section, five minutes for the Second Section, and five minutes for the Third Section. Subjects are neither allowed to go ahead to the succeeding section if they finish before time is called; nor are they allowed to return to the previous section if they complete a subsequent section. The subjects' task on each trial is to locate a previously seen simple figure within a larger complex figure which has been so organized as to obscure or embed the simple figure. The subjects are permitted to turn to the back cover as often as necessary throughout the test administration. The subjects are asked to trace the simple figure in the complex figure, using a soft pencil. The test booklet is then scored by the examiner by visually comparing the traced simple figures with those provided in the scoring key - the simple figure traced over each complex figure. Credit is given for an item if all the lines of the simple figure are traced (Witkin, *et al.*, 1971; Goodstein, 1978).

The First Section of the GEFT, consisting of seven items, is not scored, but is intended for practice. The number of simple figures correctly traced on the Second and Third Sections constitute the raw score on the GEFT. Thus, scores consist of the number of correct responses. The range of raw scores is 0 to 18. In the strictest interpretation, scores on GEFT reflect the extent of competence at perceptual disembedding. As noted by Goodstein, "the EFT is offered, not as a simple measure of one's readiness to overcome the contextual effects of embedding, but rather as a more basic way of tapping into the experiences of one's environment - as a measure of the global-analytic dimension of cognitive functioning" (1978, p. 572).

The GEFT manual provides normative data by means, standard deviations, and

quartile equivalents for a small samples of college men ($N = 155$) and women ($N = 242$). Men performed slightly but significantly better than women ($p < .005$), which is consistent with the sex differences usually obtained with the EFT. Scores in the first quartile are from 0 to 9 for men and 0 to 8 for women, indicative of extreme field dependence: scores in the second quartile are from 10 to 12 in men and 9 to 11 in women for field-dependence; scores in the third quartile are from 13 to 15 in men and 12 to 14 in women for field independence; scores in the fourth quartile are from 16 to 18 in men and 15 to 18 in women for extreme field-independence. The scores form a continuum with scores nearer to or farther from either point indicative of the relative tendency toward one or the other of the styles (Witkin, *et al.*, 1971).

The validity and reliability of the GEFT have been determined using appropriate statistical methods. The validity of the GEFT has been evaluated by correlations with the EFT; with the portable rod-and-frame test, PRFT (a test of field dependence/independence developed in 1948 during Witkin's early research in the area of cognitive style); and with a scale applied to human drawings - ABC (a scale which rates drawings according to degree of articulation of the body concept). The correlations between GEFT and the EFT are high, particularly for men; $r_{tt} = -.82$ for males and $r_{tt} = -.63$ for females. Correlations between GEFT and PRFT fall within the range of correlations typically found between EFT and the rod-and-frame test (RFT); $r_{tt} = -.39$ for males and $r_{tt} = -.34$ for females. Correlations with the EFT and the PRFT should be negative because the tests are scored in reverse fashion. There are substantial correlations between the GEFT and the ABC particularly for men; $r_{tc} = .71$ for males and $r_{tc} = .55$ for females; the correlations are comparable to those between the EFT and the ABC (Witkin, *et al.*, 1971).

The reliability of the GEFT has been determined by the correlation between parallel forms with identical time limits, the two nine-item sections. The correlations between the two main sections of the test were computed and corrected by the Spearman-

Brown prophecy formula. The reliability estimate is $r_{tc} = .82$ for both males ($N = 80$) and females ($N = 97$) (Witkin, et al., 1971).

The simple and straightforward instructions for administering the GEFT, and its validity and reliability indicate that it is a satisfactory substitute for the EFT in cognitive style research requiring group testing. (See Appendix B)

Michigan Educational Assessment Program (MEAP)

The Eighth Grade Writing Test of the Michigan Educational Assessment Program (MEAP) was developed by the Michigan State Board of Education (1992) as the measure of writteng composition. The rationale for using the MEAP Writing Test is its compatibility with current theory and research in writing. The test items of the MEAP Writing Test are written to reflect the conceptual changes in the teaching and learning of writing; the shifting from focus on the composed product to the composing process.

The Michigan Educational Assessment Program (MEAP) is a statewide testing program implemented by the Michigan State Board of Education (State Board of Education, 1989). The MEAP Eighth Grade test in writing and science are administered in the spring to all fifth, eighth, and tenth grade students. The first administration of the MEAP Eighth Grade Writing Test was 1995-1996 and consisted of items measuring the expectations of Middle, Junior High level students degree to "entertain, share, learn, inform, and respond to the literature."

The MEAP Eighth Grade Writing Test is the primary writing assessment instrument used in Michigan. There are seven broad based student outcomes. One of the seven is as follows:

As a result of a K-12 education based on a well defined core curriculum, a Michigan student will be...a person able to communicate effectively in written, visual and spoken language. Example: understand and make him/herself understand within the concept which he/she is operating; convey information clearly and concisely; select the mode of communication most appropriate within various contexts; express his/her needs, desires and opinions; operate as both the sender and receiver of

messages, and access tools and strategies for gaining clarification (Model Core Curriculum outcomes and Position Statement on Core Curriculum, p. 5). This test is based on the Michigan Essential Goals and Objectives for Writing that speaks to, by definition, writing is a process of making meanings; writing should be thought in the framework of the writing process; prewriting, drafting, revising, proofreading, and publishing; writing takes place within specific situations; writing is both cooperative as well as individualistic; meaning that a writer composes arrows out of a set of understanding about language and community that is shared by the writer and his or her potential readers; and writing is a way to learn. The MEAP Writing Test primarily focuses on writing as process.

The eighth grade test provides students with brief materials (quotations, proverbs, cartoons, newspaper excerpts, or photographs) related to the writing topic. These materials are provided simply to help students generate ideas before writing; students are not tested on their understanding or use of these materials. To ensure that the test is measuring writing rather than reading, the stimulus materials are very brief and are read aloud by the teacher (Michigan Assessment Program, 1996).

The descriptions for standard setting of the Michigan Education Assessment Program Eighth Grade Writing Test are presented in Appendix A, Table 2.

The prompts selected for students to write on are identified by the English Standards Project Committee. The topic used for the 1995-96 Michigan Education Assessment Program Eighth Grade Writing Test was - "An important person." The prompts used were; Think about all of the people who make a difference in your life in various ways, who are some of them? Are there important people in your life who are older? Younger? How might an important person make a difference in someone's life?

Writing Assessment in Michigan

The Michigan Educational Assessment Program first measured the writing ability of students in a pilot study during 1982. Students in grades 4, 7, and 10 from eighteen schools wrote two timed essays, one expressive and the other persuasive. The results of this assessment indicated that student writing performance in Michigan needed

immediate attention.

The assessment pointed up a need for better teacher preparation in writing instruction and a revised set of writing objectives. In the fall of 1985, therefore, the new Michigan Essential Goals and Objectives for Writing was adopted by the State Board of Education. This was followed, in 1987, by the development of a "State Plan and Position State: Writing to Learn/Learning to Write." The State Board then directed the Michigan Educational Assessment Program to begin development of a writing assessment based on these new documents.

The advisory groups of Michigan educators and Michigan Department of Education staff supported the philosophy that writing must be assessed not as a product resulting from a first draft but as a process that occurs over time. In 1987 a State Writing Committee (sometimes called the MEAP Advisory Committee) began meeting to develop the blueprint for a voluntary statewide writing assessment. As a result of its deliberations, two pilot assessments were conducted.

The purpose of the first trial, in the fall of 1988, was to see whether students would produce better papers when given additional time to use process writing. The study conducted in grades 4, 6, and 10, suggested that students in grades 6 and 10 produced their best papers when given more time. The data further showed that for students in grade 4, additional time for writing had little differential effect on the quality of their papers.

The second writing pilot was designed to answer further questions about assessing student writing. Experienced readers studied and scored three types of writing gathered in portfolios from students in grades 3, 6, and 9: (1) a finished piece written over a period of up to five days, (2) a piece of writing produced in a single sitting of no more than 40 minutes, and (3) a self-selected piece written at another time and perhaps for another class. Conclusions based on these trials and other research formed the basis for the State Writing Committee's recommendation to the Board of Education in January, 1991.

Recommendations for a Voluntary Writing Assessment:

1. A writing assessment be conducted at grades 4, 7, and 10. This would be done in a single class period for three days following the currently approved MEAP reading assessment. The writing topic would be selected from one of the reading assessment passages;
2. Include a writing section on all other MEAP assessments (currently mathematics, reading, and science); and
3. Collect a portfolio of students' written work for students assessed in 1 and 2 above.

Although approved by the State Board of Education, this proposal was not implemented.

Development of Assessment Plan

The guiding principles for assessment were: the interests of the students are paramount in assessment; the primary purpose of assessment is to improve teaching and learning; the teacher is the most important assessment instrument; the consequences of an assessment procedure are the first, and most important, consideration in establishing the validity of the assessment; the assessment process should involve multiple perspectives and sources of data; assessment must reflect, and allow for critical inquiry into, curriculum and instruction; assessment must recognize and reflect the intellectual and social complex nature of literacy and the important role of school, home, and society in literary development, assessment must be based on the school community.

In 1992 the Michigan Council of Teachers of English passed a resolution regarding assessment. This resolution takes a stand strongly discouraging the use of traditional standardized tests as a means of assessing writing and recommends alternative forms of assessment, such as portfolios, instead.

Even more recently, a NCTE/IRA Joint Task Force on Assessment has recently drafted Standards for the Assessment of Literacy (October proficiency testing in Michigan). All eleven standards are standards that must be subscribed to. Careful readers will notice that these standards place little value on large-scale, external testing

endeavors but value to a much greater extent the professional judgment of students' teachers. These values have informed our discussions about test design and about scoring procedures. Those that serve as broad guiding principles for assessment are presented below:

The interest of the student are paramount in assessment.

Rationale: We recognize that assessment experiences have consequences, and they must serve, not harm, students. First and foremost, assessment must encourage students to reflect on their own reading and writing in productive ways, to evaluate their own personal growth and to set goals... Assessment should emphasize what students can do rather than what they cannot do. Second assessment must provide useful information to inform and enable reflection. Specific information on students' knowledge, skills, strategies, and attitudes helps teachers, parents, and students set goals and plan instruction more thoughtfully. Third, the assessment must yield high quality information. The quality of information is suspect when tasks are too difficult or too easy, when students do not understand the tasks or cannot follow the directions, or when they are too anxious to show their best or even their typical work.

Implications: Since group-administered, machine-scored tests do not normally encourage students to reflect constructively on their reading and writing, do not provide specific and timely feedback, and generally do not provide high quality information about students, they seem unlikely to serve the best interest of

Several years ago, Hairston (1982) described the principal of the newer paradigm

that has emerged:

1. It focuses on the writing process; instructors intervene in students' writing during the process.
2. It teaches strategies for invention and discovery; instructors help students to generate content and discover purpose.
3. It is rhetorically based: audience, purpose, and occasion figure prominently in the assignment of writing tasks.
4. Instructors evaluate the written product by how well it fulfills the writer's intention and meets the audience's need.
5. It views writing as a recursive rather than a linear process; prewriting, writing, and revision are activities that overlap and intertwine.
6. It is holistic, viewing writing as an activity that involves the intuitive and non-rational as well as the rational faculties.
7. It emphasizes that writing is a way of learning and developing as well as a communication skill.
8. It includes a variety of writing modes, expressive as well as expository.
9. It is informed by other disciplines, especially cognitive psychology and linguistics.
10. It views writing as a discipline creative activity that can be analyzed and described; its practitioners believe that writing can be taught.
11. It is based on linguistic research and research into the composing process.
12. It stresses the principle that writing teachers should be people who write. (Hairston, p. 86)

Classrooms that reflect the "new" paradigm or process approach to writing instruction are unique writing environments. While, as in any arena, there can be many variations on a theme, process-oriented classrooms tend to share a set of common

characteristics. Zemelman and Daniels (1988) list conditions and methods that have come to be associated with the process paradigm:

1. Teachers who understand and appreciate the basic linguistic competence that students bring with them to school, and who therefore have positive expectations for students' achievements in writing.
2. Regular and substantial practice in writing.
3. Instruction in the process of writing--learning how to work at a given writing task in appropriate phases, including prewriting, drafting and revising.
4. The opportunity to write for real, personally significant purposes.
5. Experience in writing for a wide range of audiences, both inside and outside of school.
6. Rich and continuous reading experience, including both published writing and the work of peers and teachers.
7. Exposure to models of writing in process and writers at work including both classmates and skilled adult writers.
8. Collaborative activities that provide ideas for writing and guidance in revising drafts in progress.

Scoring

For the Writing test each answer is scored by two scores. All of the following aspects of writing are considered: ideas and content, organization, style (sentence structure or vocabulary) and conventions of writing (grammar, usage, mechanics, spelling). Unless a paper cannot be read, neatness and penmanship do not affect a student's score. Scores range from 1.0 to 4.0. Only the final version is scored (Michigan State Board of Education, 1995). The score is identified as "proficient" or "not yet proficient." No explanations are given whereby students will know why they passed or failed the test.

Scorers

All scorers are college graduates who are trained and are required to pass a test in scoring before they are allowed to score any student tests. Scorers do not see the names of students, schools, or school districts. Scorers are trained to focus on the strengths of the writing rather than the weakness. Scorers are observed during the scoring process to make sure they stay consistent with the Michigan scoring guidelines (Michigan State Board of Education, 1995).

The Report Form

The report form is the same for five and eighth grade students. The individual student report (ISR) is provided for every MEAP test taken (see Appendix A, Table 3). If a fifth or eighth grade student takes only the writing or science test, one side of this report will contain no score. If a student takes both, but his or her name or birthdate is not identical on both answer documents, there will be two separate Individual Student Reports for the same student. The average of two independent readers' scores appears under "Points Earned." Scores range from a low of 1.0 to 4.0, the total number of points possible. Parents receive a report from the MEAP office (See Appendix A, Table 4).

POPULATION AND SAMPLE

Subjects for this research project were selected from ninth grade students from six high schools in a metropolitan school district in western Michigan. The District's enrollment of eighth grade African American students for the 1995-96 school year was 822. Those taking the Michigan Educational Assessment Eighth Grade Writing Test totaled 577. The District's total enrollment of ninth grade African American students for 1996-97 was 907.

Selection of Subjects

The cognitive style pool of low field-independent and high field-independent students, consisted of 200 ninth grade students who were tested on the Group Embedded Figures Test (GEFT). The cognitive style measure was given to ninth grade students

from four comprehensive and two alternative high schools in a metropolitan school district in western Michigan, who agreed to participate in the study. Appendix C contains copies of letters sent to the District Superintendent, the Director of Research and Evaluation, the Supervisor of Secondary Education, and principals. A letter requesting parental permission was mailed home. A copy of this letter and the parental consent form appear in Appendix D. The selection of 200 students was drawn from a pool of the 577 African American ninth grade students who had test scores as eighth graders on the Michigan Education Assessment Program Eighth Grade Writing Test. Out of the five hundred seventy seven permission forms mailed to parents, 241 or (41.76) percent of forms were returned. Parents granting permission were 227 or (94.19) percent of returned forms.

This study focuses on African American ninth grade students, to determine their cognitive style preference. The Group Embedded Figures Test (GEFT) was administered to 200 ninth grade students. The cognitive style measure was given to students from four comprehensive high schools and two alternative high schools in a metropolitan school district in western Michigan. The measurement for the study is the Michigan Education Assessment Program (MEAP) Eighth Grade Writing Test of 1995-96.

Research Subjects

The GEFT raw scores from the pool of the 200 subjects were recorded and matched with the raw scores for writing of the 1995-96 Michigan Educational Assessment Program (MEAP) Eight Grade Writing Test from the data bank of the Research and Evaluation Data office of a metropolitan school district in western Michigan. All 200 subjects had MEAP scores on their student district data sheets. Detailed GEFT results of the selected research subjects are found in Appendix E, Table 1, and Appendix F, Figure 1. Demographic information relative to the research subjects are presented in Appendix E, Tables 2 and 3 and Appendix F, Figures 2 and 3.

The median for the GEFT raw scores of the 200 subjects was the criterion used to

form two categories of cognitive styles - low field-independent and high field-independent (Appendix E, Table 4 and Appendix F, Figure 4).

The Median for the GEFT raw scores was 3.0, those at or below the median were classified as low field-independent, and those above the median were classified as high field-independent. The raw scores in the GEFT consist of the number of correct responses. The range possible raw scores is 0 to 18. The data are summarized in Appendix E, Tables 5 and 6 and Appendix F, Figures 5 and 6. Demographic data relative to the subjects cognitive style categorization is shown in Appendix E, Tables 7, 8, 9 and 10 and Appendix F, Figures 7, 8, 9, and 10.

Procedure

Group Embedded Figures Test (GEFT)

The Group Embedded Figures Test (GEFT) was administered to the subjects during the month of July, 1997, at the district's testing Center. The subjects were tested during thirteen sessions. The researcher acted as examiner for administering the GEFT to all students. Materials used for the test were a test manual, test booklets, a stop watch, and pencils with erasers. The examiner provided pencils to all subjects.

Before administering the test, the examiner explained to the subjects that the test is one that identifies people's preferred modality of learning and that the test is used to identify which way of thinking Black students use. The examiner informed the subjects that the test was being done as part of a research project that could lead to the development of more effective teaching, particularly writing. The examiner informed students that they would not be publicly identified by names after results of the test were collected, that the test in no way will affect their grades, and that failure to participate in the study would not, in any way, adversely affect the non-participants. The examiner then stopped and asked for questions. Next, she requested that those individuals who did not wish to participate leave the room and retire to a designated area, so that the test could be administered. The detailed instructions given for taking the GEFT are provided in

Appendix E.

Each section of the test was timed. At the end of the testing period, examinees were told to close their booklets and put down their pencils. The examiner then collected the test booklets and thanked the examinees for their participation.

The GEFT was scored in the following three days of the administration of the test. Each test booklet was hand scored and re-checked twice to insure verification. The raw scores for each examinee were recorded.

Michigan Education Assessment Program (MEAP)

The Michigan Educational Assessment Program (MEAP) Eighth Grade Writing Test for the spring of 1995-96 was administered by local school district examiners. The tests were scored by the Michigan Department of Education and the data were returned to the local school district by September, 1996. Instructions for the administration of the tests were provided in the Michigan Educational Assessment Program Examiner's Handbook (Michigan Board of Education, 1989).

Data Analysis

Two sets of raw scores were obtained for each subject: a raw score and classification from the GEFT, and a raw score from the MEAP Eighth Grade Writing Test. Scoring on the GEFT was determined by counting each correct item from the two nine-item sections of the test; classification of the scores was determined by fitting it into the previously selected criteria for low field-dependent or high field-independent. The 1995-96 MEAP Eighth Grade Writing Test was scored by counting the number of correct items. Raw scores ranged from 10 to 35.

Means, Medians, and modes were computed for the GEFT and writing comprehension measure under analysis from the MEAP Eighth Grade Writing Test.

These formed the base for all subsequent statistical analysis (see Appendix E, Table 11). The coding sheet in Appendix G reveals the way the data were organized and categorized for statistical analysis (SPSS, Inc., 1988).

Data from the MEAP Eighth Grade Writing Test were analyzed by means of a one-way analysis of variance (ANOVA) with the independent variable being cognitive classification, i.e., low field-independent, and high field-independent, and the dependent variable being the raw scores obtained on the writing measure. F values were obtained on a one way ANOVA. F values were considered significant if values exceeded the value $p < 0.05$. The confidence level (Alpha = 0.05) was chosen to maximize the possibility of rejection of the null hypothesis, and because it provides a reasonable protection against an excessive number of Type I and Type II errors (Andrews, 1981; Irwin, 1984; Norusis, 1988; SPSS. Inc., 1988; Sharp, 1979) p.79.

The rationale for using one-way ANOVA in this study is that it allowed the researcher to test the difference between groups by comparing pairs of sample mean (raw scores from the writing test) on one independent variable (cognitive style, i.e., low and high field-independent) to test the null or statistical hypothesis (meaning there is no difference between the groups). Instead of using multiple-tests to compare all possible pairs of means, one-way ANOVA allowed for testing the differences between all groups and made more accurate probability statements than using a series of separate t-tests. The statistical formula in one-way ANOVA used the variances of the groups and not the means; and calculated the F value that reflected the degree of differences in the means, call F ratio. The F ratio was a three-or-four-digit number that was used to find the level of significance used by the researcher to reject or not to reject the null hypothesis under

consideration. If the F value that was calculated was large enough, the null hypothesis was rejected with confidence that the researcher was correct in concluding that at least two means were different (Andrews. 1981; Irwin. 1984; Norusis. 1988; Runyon & Haber. 1980; Sharp. 1979).

The interpretation to reject or not to reject the null hypothesis depended on the predetermined level of significance. First, the predetermined value of the level of significance in this study was stated as $\text{Alpha}=0.05$ for a Type I error. Second, the researcher rejected or did not reject the null hypothesis by comparing the computed level of significance with the predetermined level. Finally, if the calculated significance was less than the predetermined level ($p < 0.05$), then the null hypothesis was rejected and was stated that there was a statistically significant difference between the groups compared (Runyon & Haber.1980; Sharp.1979).

The researcher selected and stated the level of significance at the value of 0.05 in order to indicate what the chance was that she was wrong in rejecting the null hypothesis. Also called level of probability, p level, or t (alpha) level, it was expressed as a decimal and showed how many times out of a hundred it would have been wrong to reject the null hypothesis (McMillan & Schumacher.1984; Runyon & Haber.1980; Sharp.1979).

The basis for the inferential statistical test used in this study was the probability of situation. Therefore, rejecting or not rejecting the null hypothesis was also related to probability or chance because of sampling error. In other words, all that was given was the probability of being correct or incorrect in rejecting or not rejecting the null hypothesis (McMillan and Schumaker, 1984; Runyon and Haber, 1980; Sharp, 1979).

The logic for the level of significance was an assumption on the part of the

researcher that the null hypothesis under consideration was correct and then saw what the probability was, that the same means that were calculated, would have been different by chance alone. If the researcher found that there was a probability of five times in a hundred to find a particular difference in the means ($p < 0.05$), then the null hypothesis under consideration was rejected because it was quite probable that the null hypothesis was false, in other words, the level of significance told the researcher, the chance probability of finding differences between the means. If the difference between the means is larger, then the p value is smaller, since the chance of getting means farther apart, when it is assumed the means are in fact the same, is less than the chance that the means are closer together. The lower the level of significance, therefore the more confidence in rejecting the null hypothesis and in favor of the research or alternative hypothesis (McMillan and Schumacher, 1984; Runyon and Haber, 1980; Sharp, 1979).

It was possible that the researcher could have been wrong in rejecting the null hypothesis under consideration. Rejecting a null hypothesis that is true is called a Type I error. The probability of making this type of error is equal to the level of significance; that is, with the significance level of 0.05 in this study, there was a probability of five times out of 100 that the sample data would have led the researcher to reject the null hypothesis when it was in fact true (McMillan and Schumacher, 1984; Runyon & Haber, 1980; Sharp, 1979).

All statistical analyses in this study were performed by using the Statistical Package for the Social Sciences (SPSS-X) program release 3.0 for IVSM Michigan Terminal System (MTS) at Wayne State University's Mainframe Computer. Guidelines and procedures for the utilization, interpretation and analysis of the SPSS-X Program can

be found in Norusis (1988) and SPSS Inc. (1988). A detailed presentation of the results follow.

Chapter IV

DATA ANALYSIS AND RESULTS

This chapter describes the descriptive statistical procedures and analysis of the data obtained from the MEAP Eighth Grade Writing Test, together with the inferential statistics procedures and data analysis. Some common statistical procedures were used to analyze the data that was gathered to investigate the stated research problem; that there are differences in written composition by low field-independent and high field-independent cognitive styles. Descriptive statistical procedures were used for summarizing and organizing the data. Inferential statistics procedures, were used to make inferences, or predictions about the similarity of samples for populations from which they were drawn. Simply stated, inferential statistics provided the necessary help to carry out a test of statistical significance to determine the probability of being correct or incorrect, to reject or not to reject the null hypotheses; and to make conclusions about the larger population from which the samples were drawn (Borg and Gall.1893, McMillan and Schumaker.1984).

Frequency distribution, measure of central tendency, and measures of variability were the most frequently used descriptive statistical procedures. There are many types of descriptive statistics techniques that correspond to different measurement scales. The level of measurement for writing, the dependent variable, was interval. For the low field-independent and high field-independent cognitive styles categories, the - independent variable, the level of measurement was nominal. After considering the level of measurement for each variable, the most appropriate descriptive statistics techniques were selected to describe the data. These included: frequency distribution, histograms, means,

medians, modes, ranges, standard deviations, and variances (Borg and Gall.183; McMillan and Schumaker. 1984; Norusis.1988).

At the time the data were collected, the observations on the writing comprehension were organized so that the results could be easily and correctly interpreted. This was done by choosing to represent the grouped data pictorially by frequency distributions and histograms according to the type of measurement (Borg and Gall.1983; McMillan and Schumaker.1984; Norusis.1988). The frequency distributions of the data are presented in Appendix E, Table 11.

Also, the same frequency data are show cased pictorially utilizing histograms. Histograms are displayed in a bell curve graph to represent the frequency of occurrence of each score. Histograms of frequency data are shown in Appendix F, Figure 11.

In addition to knowing the frequency distribution of the sets of data, there was the need to get some idea of the mean (average) scores or observations utilizing measures of central tendency. Other measures of central tendency are the median and the mode (Borg and Gall, 1983; McMillan and Schumaker, 1984; Walker, 1985). These statistics provided information about the writing comprehension raw scores of the MEAP Eighth Grade Writing Test attained by subjects according to cognitive styles categories.

The arithmetical average of all the scores in a frequency distribution is the mean (M). These were calculated by summing all the raw scores of the writing comprehension measures according to cognitive style category, and then dividing the sum of the measures by the number of scores. The mean is the most frequently used measure of central tendency because every score is used in computing it. The weakness of the mean is when a distribution with extremely high or low scores give a false impression of the

distribution. The mean is pulled toward the extreme scores (Borg and Gall, 1983; McMillan and Schumaker, 1984; Walker, 1985). The means obtained from the data in this study were very essential to the interpretation of the result, when the groups were compared to each other. The means for the writing comprehension raw scores of the MEAP Eighth Grade Writing Test attained by subjects according to cognitive styles categories are shown in Appendix E, Tables 12 and 13.

The mode was simply the score that occurred most frequently in a distribution. It is useful when there is an interest in knowing the most common score or observation (McMillan and Schumaker, 1984; Sharp, 1979; Walker, 1988). The modes for the raw scores on the writing comprehension measure attained by cognitive styles categories are shown in Appendix E, Tables 12 and 13.

The central tendency measures utilized in this study and described above, were only one method used to represent groups of scores. In order to provide a full description of the data, measures of variability such as the range, standard deviation, and variance were used. The measures of variability showed how spread out the distribution of scores were from the mean of a distribution, or how much the average scores differed from the mean. Variability, then, gave information about the difference between scores of a frequency distribution (Borg and Gall, 1983; McMillan and Schumaker, 1984; Runyon and Haber, 1980; Sharp, 1979; Walker, 1985).

The most obvious measure of dispersion was the range. Simply put, it was the difference between the highest and the lowest scores in a distribution. The range can be misleading if there is a typical high or low score. The range fails to indicate anything about the variability of the scores around the mean of the distribution (McMillan and

Schumaker, 1984). The ranges of the writing comprehension raw scores of the MEAP Eighth Grade Writing Test according to cognitive styles categories are presented in Appendix E, Tables 12, and 13.

A numerical index indicative of the average variability of scores is the standard deviation (SD). It shows about the distance of the scores from the mean in a distribution. A frequency distribution that has a relatively heterogeneous set of scores that spread out widely from the mean will have a larger standard deviation than a homogeneous set of scores that cluster around the mean. The initial step in calculating the standard deviation was to ascertain the distance between each score and then the mean, thus determining the amount that each score deviated. In one sense, the standard deviation was simply the average of all the deviation scores of a frequency distribution standardized. For every set of scores, a standard deviation was computed that was unique to the distribution and indicated the amount, on the average, that the set of scores deviated from the mean (McMillan and Schumaker, 1984; Runyon and Haber, 1980; Walker, 1985). Appendix E, Table 14 shows the standard deviations of writing comprehension of raw scores of the MEAP Eighth Grade Writing Test according to Cognitive Styles categories.

The variance of a distribution is a measure of dispersion related to the standard deviation. Variance is defined verbally as the sum of the squared deviations from the mean divided by the total number of scores of the distribution. The standard deviation is equal to the square root of the variance (Runyon and Haber, 1980). However, the variance was used as a general measure in regard to the dispersion of the distribution for the selection of the inferential statistical technique used in this study. The variance for writing comprehension raw scores according to cognitive styles categories are shown in

Appendix E, Tables 12, and 13.

The discussion to this point has centered around the descriptive statistics that were used to summarize the groups on a single variable at a time. There were however, many questions of interest that were dependent on how the variables under study were related to each other within the groups of scores. Were there differences in written composition by low field-independent and high field-independent cognitive styles? In making statements about investigated events, the language should reflect the probability nature of the event. The numbers, concepts, and the terms used in inferential statistics provided the language in this study. Although there were a great number of inferential statistical procedures considered including the t-test; the one-way analysis of variance (ANOVA) was the most appropriate test of statistical significance selected to determine in a precise way the probability of the events mentioned above to occur (Andrews *et al.*: 1981; Borg and Gall, 1983, Irwin, 1984; McMillan and Schumaker, 1984; Norusis, 1988; Sharp, 1979).

The most suitable technique of inferential statistical analysis, one-way ANOVA, was selected for testing the significance of difference between the means of the samples. The choice for using one-way ANOVA was based on the scale of measurement of the independent variable and the dependent variables, the number of independent and dependent variables, and the interest of this study to compare groups with respect to variance. The independent variable in an ANOVA design can be measured on any scale: nominal, ordinal, interval, or ratio, but the dependent variable must be measured on an interval or ratio scale. Furthermore, one-way analysis of variance is a statistical procedure that is used with one independent variable and two or more groups identified by this variable. In this study there was one independent variable that was measured on a

nominal scale and two dependent variables that were measured on an interval scale. Hence, the variables under study, met the necessary guidelines to utilize one-way analysis of variance as an inferential statistical technique to analyze the data (Andrews *et al.*, 1982, Borg and Gall, 1983; Irwin, 1984; McMillan and Schumaker, 1984; Norusis, 1988).

A test of statistical significance used to determine whether means scores on one or more factors (independent variables) differ significantly from each other and whether the various factors interact significantly with each other is called an analysis of variance. ANOVA also can be used to determine whether samples variances differ significantly from each other. A test of significance is concerned with the inferences made from sample statistics to population parameters. Thus, a test of significance is made to determine how probable it is that the difference we have found between the samples will also be found in the populations from which they were drawn (Borg and Gall, 1983; Jaeger, 1983; McMillan and Schumaker, 1984; Norusis, 1988; Walker, 1985).

The one-way analysis of variance in this study was used to test the statistical significance of a hypotheses with theoretical basis that cognitive styles permeate all forms of behavior and since writing comprehension is a complex behavior, it follows that cognitive styles are reflected in writing comprehension. Specifically, two groups were formed with varying cognitive styles in categories of low field-independent and high field-independent, and it was hypothesized that high field-independent thinkers will do better on written composition than low field-independent thinkers. The test of statistical significance one-way ANOVA, then permitted measurement of differences between the writing comprehension raw scores according to cognitive styles categories. The one-way

analysis of variance used to compare the mean scores of writing comprehension as measured by the MEAP Eighth Grade Writing Test according to cognitive styles categories is presented in Appendix E, Table 15.

Interpretation and Discussion of the Statistical Analyses of the Writing Measure of MEAP Eighth Grade Writing Test

The initial procedure for the statistical analyses of the data was to establish the research and null hypotheses as stated in Chapter 1. The research hypothesis for the measure of writing comprehension states that high field-independent thinkers demonstrate higher raw scores on written comprehension of the MEAP Eighth Grade Writing Test than low field-independent thinkers. The correspondent null hypothesis states that high field-independent and low field-independent thinkers demonstrate no statistically significant difference in the raw scores on writing comprehension of the MEAP Eighth Grade Writing Test. The statistical analyses and discussion of results for these hypotheses follow.

To begin the process of analyzing the data, the first step was to compute the descriptive statistics for each comparison group in the study. These included the groups frequencies, histograms, means, medians, modes, ranges, standard deviations, and variances. Data on the writing comprehension was measured by the total number of points earned in the following aspects of writing: ideas and content organization style (sentence structure or vocabulary), and conversations of writing (grammar, usage, mechanics, spelling) on the MEAP Eighth Grade Writing Test. Data obtained from these analyses for low field-independent and high field-independent subjects are presented in Appendix F, Figures 12 and 13 and in Appendix E, Tables 12 and 13.

The frequency distributions of the raw scores for low field-independent and high field-independent on the measure of writing comprehension of the MEAP Eighth Grade Writing Test are displayed in Appendix E, Tables 12 and 13 respectively. About 20 percent of the low field-independent subjects (21 out of 105) scored below the mean score of 19.28 points; and 80 percent (79 out of 105) scored above the mean score of 19.28 points. The mode score of 20 points was obtained by 69.5 percent of the low field-independent subjects (73 out of 105) of the 105 low field-independent subjects; 20 percent were concentrated in the range of 10 to 15 points; and 10.5 percent had raw score values in the range of 25 to 30 points. On the other hand, nearly 39 percent of high field-independent subjects (37 out of 95) scored below the mean of 27.6 points; and 61 percent (58 out of 95) scored above the mean. The mode score of 30 points was scored by 60.0 percent of the high field-independent subjects (57 out of 95). Of the 95 high field-independent subjects (39.0) percent scored below the mode (37 out of 95) 1.0 percent scored above the mode (1 out of 95).

The histograms for the entire group of subjects is presented in Appendix F, Figure 11. The histogram of the raw scores on the writing comprehension of the MEAP Eighth Grade Writing Test among low field-independent and high field-independent subjects are shown in Appendix F, Figures 12 and 13 respectively. For the low field-independent subjects, the distribution had a peak at the 20 raw score value. The majority of the low field-independent subjects had 20 raw scores value and very few of the same subjects had raw score values less than 15 and more than 25. For the high field-independent subjects the distribution is different. There was a sharp peak at the 30 raw score values and there was a smaller peak at the 25 and fewer of the raw scores were above 30 and below 25.

As shown in Appendix E, Table 12, the writing comprehension measure mean score for low field independent subjects was 19.28 points and the mean score for high field-independent subjects was 27.57 points. Thus, the mean score for high field-independent subjects was 8.29 points higher than the mean score for low field-independent on the same measure. Therefore, the distributions of scores for low field-independent subjects (Appendix F, Figures 12) was symmetrical. There is one symmetrical with a high concentration of the scores in the center of the distribution. This is indicated by the low field-independent (Appendix F, Figure 12) and is called a high arching or leptokurtic curve. This was an indication that the score distributions were more extreme at one end, and thus the means were nulled toward them. Since most of the scores were located at the high end of the distributions, both groups were negatively skewed (Appendix F, Figures 12 and 13). The mode of most common score was 10 points higher for high field-independent subjects (30.0 points), than the mode for low field-independent subjects (20.0 points). The range scores for both groups were relatively close together; 25 points for high field-independent subjects and 20 points for low field-independent subjects.

Table 14 showcases the means, standard deviations and standard error for the raw scores on the writing comprehension of the MEAP Eighth Grade Writing Test for low field-independent and high field-independent subjects. The relatively small and comparable values of the variances of both samples, suggest that the values of the raw scores were somewhat clustered around their means and that their variability were very similar. The variance for low field-independent subjects was 17.99, while for the high field-independent subjects it was 13.75. Its square root, the standard deviation, was 4.24

for low field-independent subjects, and it was 3.70 for high field-independent subjects. Since the values of the individual raw scores did not vary really much within each group, but their means differed substantially, there was evidence to suspect that the populations means were not equal.

Analyses of the descriptive statistics indicated differences in the raw scores on the writing comprehension of the MEAP Eighth Grade Writing Test among the two cognitive styles categories. A difference of 8.29 points was found between the sample means of high field-independent subjects and low field-independent subjects (27.57 - 19.28) raw scores' on the writing comprehension of the MEAP Eighth Grade Writing Test. Were the observed variability among samples attributed to just the natural variability among samples means, or a reason to believe that the two groups had different means in the population? How often would a difference in a score of this magnitude or larger be found between two populations whose means are the same? The null hypothesis stated that in the population, the means of the two groups were equal. That is, there was no difference in the mean of the raw scores on the writing comprehension of the MEAP Eighth Grade Writing Test for low field-independent and high field-independent cognitive styles. The research hypothesis stated that there was a difference between the two groups. That is, high field-independent thinkers demonstrated higher raw scores on writing comprehension of the MEAP Eighth Grade Writing Test than low field-independent thinkers.

The next step in the analyses of the data was to apply a test of significance to measure the differences between the two samples and to make an inference about the populations from which they were drawn. A test of significance would determine

whether to reject or not to reject the null hypothesis. Analysis of variance (ANOVA) was used to test the null hypothesis that the two population means were equal. ANOVA examines the variability in the sample and, based on variability, determines whether there is reason to believe the population means are not equal. It draws conclusions about means by looking at variability. A one-way ANOVA was used to compare the mean scores on the writing comprehension measure according to cognitive styles. The one-way ANOVA was used because the subgroups differed on one factor, cognitive styles. Certain assumptions are required for correct application of the ANOVA test. Independent samples from normally distributed populations with the same variance must be selected. The data for the writing comprehension of the MEAP Eighth Grade Writing Test met these conditions and the analysis of variance was utilized.

The one-way ANOVA for the raw scores on the writing comprehension of the MEAP Eighth Grade Writing Test is shown in Appendix E, Table 15. Results indicated a statistically significant difference in the raw scores between low field-independent and high field-independent subjects. The analysis of the data revealed a statistical significant difference for the measure of writing comprehension of the MEAP Eighth Grade Writing Test, $F(1,198) = 214.62$, $p < .05$, between low field-independent and high field-independent groups. Thus, on the measure for writing comprehension of the MEAP Eighth Grade Writing Test, the null hypothesis that the population means were equal for low field-independent subjects and high field-independent subjects was rejected. More specifically, the null hypothesis that there were no statistically significant difference in mean of the raw scores on the writing comprehension of the MEAP Eighth Grade Writing Test for low field-independent thinkers and high field-independent thinkers was rejected.

Therefore, the research hypothesis that there were differences in the mean of the raw scores on the writing comprehension of the MEAP Eighth Grade Writing Test for low field-independent subjects and high field-independent subjects was accepted. Specifically, the research hypothesis that high field-independent thinkers demonstrated higher raw scores on writing comprehension of the MEAP Eighth Grade Writing Test than low field-independent thinkers was accepted. The difference between the sample means reflected a true difference between the population means. A comparison of the sample means demonstrated a difference between the two cognitive styles categories. The mean score for the high field-independent subjects was 8.29 points higher than the mean score for the low field-independent subjects raw scores' on the writing comprehension of the MEAP Eighth Grade Writing Test. Results of group means and standard deviations for the raw scores in the measure of writing comprehension of the MEAP Eighth Grade Writing Test according to cognitive styles categories are presented in Tables 12 and 13.

The interpretation of the results for the rejection of the null hypothesis that the population means were equal for low field-independent and high field-independent subjects raw scores' on the measure of writing comprehension of the MEAP Eighth Grade Writing Test follows. The data in Appendix E, Tables 12 and 13 show significant differences between the population averages found for low field-independent and high field-independent subjects raw scores' on writing comprehension of the MEAP Eighth Grade Writing Test. First of all, the difference between the larger sample mean (27.57) for the high field-independent subjects, and the smaller sample mean (19.28) for the low field-independent subjects, was more than 8.29 points for the raw scores on the writing

comprehension of the MEAP Eighth Grade Writing Test. Also, the standard deviations of scores within the two samples were comparatively small. The larger standard deviation was 4.24 points, and the smaller was 3.70 points. Thus, the sample mean differed quite a bit, and the raw scores within the samples were relatively homogeneous. The combination of conditions produced the fairly large F -statistic shown for the raw scores on the writing comprehension of the MEAP Eighth Grade Writing Test in Table 21 (214.62). The small standard deviations resulted in a small mean square within groups, thus affirming the large mean square between groups produced by the sample means that differed from each other. The result was an F -statistic (214.62) that was larger than the critical value for an Alpha of a .05. In short, the very large F -statistic for the writing comprehension of the MEAP Eighth Grade Writing Test resulted from the combined effect of having sample averages that differed from each other, and relatively small standard deviations within the two samples.

Summary and Discussion

This study was designed to examine the relationships between cognitive styles and written composition. Specifically, the study aimed to compare the written composition as measured by the MEAP Eighth Grade Writing Test, of ninth grade low field-independent and high field-independent thinkers, from six high schools, in a metropolitan school district in western Michigan. The process began with selecting samples on the measure of writing comprehension. Means for each group according to cognitive style classification were computed. It was postulated that high field-independent thinkers would achieve higher raw scores on written composition as measured by the MEAP Eighth Grade Writing Test than low field-independent thinkers.

In order to demonstrate this, the population means were thus estimated and compared to find the probability that the calculated means for each group of cognitive style were different. The groups means were compared to select the appropriate statistical procedures to test the null hypothesis. The null, or statistical hypotheses, stated that there was no difference between the groups means. One-way analysis of variance (ANOVA), a statistical test was applied to determine probability that the null hypothesis was untrue. The statistical analyses of the data showed a high probability of being correct in rejecting the null hypotheses as follows: a statistically significant effect for the measure of writing comprehension of the MEAP Eighth Grade Writing Test, $F(1,198) = 214.62, P < .05$. Since the statistical analyses of the data showed that there was a high probability of justification for rejecting the null hypotheses, statistical evidence was found for the writing comprehension as measured by the MEAP Eighth Grade Writing Test of high field-independent and low field-independent thinkers. Finally, groups means for writing comprehension as measured by the MEAP Eighth Grade Writing Test, demonstrated that high field-independent thinkers scored higher on the measure of writing comprehension than low field-independent thinkers.

The results of the comparison of low field-independent and high field-independent groups supported the research hypotheses that cognitive styles were manifested in written composition. Specifically, the present study has shown a relationship between cognitive styles and written composition. More specifically, the findings of this study revealed that the raw scores on the writing comprehension as measured by the MEAP Eighth Grade Writing Test, were higher in high field-independent thinkers, who are more high in the ability to analyze and structure the field; less global or less likely to follow the field as

given, than low field-independent thinkers, who are low in the ability to analyze and structure the field; more global or more likely to follow the field as given.

Cognitive style theory which holds to the premise that broad dimensions of perceptual functioning may be reflected in the individual's cognitive activities and the extensive research of Witkin *et al.*, (1962/1964; 1979) on field dependence-independence dimension of cognitive style provided the theoretical basis of this study.

The field-dependent and field-independent cognitive styles, are contrasting modes of processing information in a continuum. At one extreme is the person with a field-dependent style who is likely to rely on external referents as guides in information processing. At the other extreme is the field-independent person who tends to give credit to internal referents. These internal referents available to field-independent people constitute a source of mediating mechanisms for analyzing and structuring the field on their own. When internal referents are less available, as indicative of field-dependent people, the person is likely to go along with the dominant properties of the stimulus field and use less intervention of mediators such as analysis and structuring. Thus, field-independent people are high in analysis and structuring skills as well as in personal autonomy. Conversely, low-independent people are low in analysis and structuring skills and also in personal autonomy (Witkin *et al.*, 1977).

For example, a common feature of situations in which this dimension of cognitive style is represented is that the person has to restructure sensory impressions of objects; or restructure symbolic representations, as in cognitive activities, to meet the requirements of the task at hand (Witkin *et al.*, 1979). Restructuring may involve the organization of a field which lacks organization, imposing a different organization to the field that the one

has, or breaking up an organized field in a way that its parts are brought back individually separated from its ground. In this regard, Witkin *et al.*, (1978) noted "the designation 'restructuring' seems appropriate for all these acts since they involve making changes in the field, or 'going beyond the information given,' rather than following the field 'as is' (p.22). Field-independent persons are better able to accomplish such restructuring, in contrast to field-dependent persons who are more likely to follow the prevailing organization of the field as given (Witkin *et al.*, 1979). Witkin and Goodenough (1981) have hypothesized that field-independent learners have a higher level of cognitive restructuring ability than field-dependent learners; and have defined restructuring as the ability to analyze, organize, or reorganize information and experience. Another way of stating this point, people with a field-independent cognitive style are more competent in cognitive restructuring than are people with a field-dependent cognitive style (Witkin *et al.*, 1978).

A wide range of perceptual and problem-solving dimensions require skills in cognitive restructuring. Some of the restructuring dimensions which have been linked to field-independence are disembedding, speed of closure, perspectivism or decentration and concept attainment. Restructuring in concept attainment has been studied in relation to field-independence. In concept attainment problems, the subject attempts to distinguish between exemplars and nonexemplars of the concept to be learned. Concept attainment is a restructuring dimension that has been linked to field-dependence-independence in terms of the approach to hypothesis-testing and to the effect of cue salience in such learning processes as hypothesis testing, recall and recognition, stimulus generalization, and transfer of training. First, with regards to the approach to hypothesis-testing field-

independent thinkers are more likely to adopt an active, hypothesis-testing, participant approach to concept attainment for information acquisition, that reflects their greater structuring ability. In contrast, field-dependent thinkers are more likely to adopt a more passive, intuitive, spectator approach to concept attainment for information acquisition. Second, with regards to the effect of cue salience field-dependent subjects accept the organization of the field as given, and are dominated by the most salient and tend to ignore the nonsalient cues in concept-attainment problems. On the opposite end, the restructuring ability of field-independent subjects make it possible for them to extract more fully from nonsalient features of a stimulus complex in their attempt to learn which attributes are relevant to a concept definition (Goodenough, 1976; Witkin, 1978; Witkin et al., 1977).

The MEAP Eighth Grade Writing Test was the measure of writing comprehension utilized in this study. The specific test scores used as the measure of writing comprehension were designed to evaluate how well a student was able to generate ideas that were focused and well supported, organize ideas and make smooth transitions; vary word choice and expression according to the audience and purpose; and demonstrate control of grammar, spelling and other language conventions.

The MEAP Eighth Grade Writing Test was written to reflect the new definition of writing adopted by the Michigan State Board of Education (1987). The new definition of writing focuses on writing as a process. The test items of the MEAP Writing Test are written to reflect the conceptual changes in the teaching and learning of writing; the shifting from focus on the composed product to the composing process. Hairston (1982) described the principal of the newer paradigm that has emerged:

“It focuses on the writing process; it teaches strategies for invention and discovery; it is rhetorically based; Instructors evaluate the written product by how well it fulfills the writer’s intention and meets the audience’s needs; it views writing as a recursive rather than a linear process;” (p.12).

Research on written composition demonstrates that the ability to communicate is based on the writer’s linguistic knowledge, knowledge of the world, and to the extent in which that knowledge is activated during writing. Writing is formal, more structural (sentences rather than “incomplete thought” more “proper grammar, that is grammar nearer the writer’s idea of what is correct (Staker 1974). Comprehension in writing is viewed as how well the student constructs meaning, organizes, and expresses his or her thoughts.

The writing process, which involves thinking, feeling and communication (Daiute, 1985; Graves, 198a; 1978b), is a dynamic, complex process. Moffett (1982) suggests that writing is a discovery process as writers expand and master inner speech. While writers are actively connecting meaning, they use their knowledge and experiences to generate ideas in order to create meaning. As they transform their experiences and knowledge into written language, they make judgements about idealized readers’ backgrounds; they make decisions about ways to express their ideas so that readers think or act in a certain fashion (Flower and Hayes, 1981).

The ability to successfully write appears to be related to the field-dependence-independence dimension of cognitive styles. Low field-independent thinkers seem to demonstrate a preference for interpersonal relationships. This preference is manifested

through a strong interest in other people, a need and desire to be physically close to people, a preference for social situations, and attentiveness to social cues (Shade, 1982). There is the leading tendency among Blacks to be interactive, not attributive (Medhere, 1989). The results of the present study demonstrated the disposition to process information in a more articulated or less articulated manner is reflected in written composition. More specifically, the findings of this study revealed that writing comprehension as measured by the MEAP Eighth Grade Writing Test is higher in high field-independent thinkers, who are high in cognitive restructuring skills and therefore, more likely to adopt an active, hypothesis - testing, participant approach to concept attainment, than in low field-independent thinkers, who are low in cognitive restructuring skills and more likely to use a spectator approach to concept attainment. Thus students' failure to write in an organized manner and construct meaning lies in the writing comprehension differences of low field-independent and high field-independent thinkers as they relate to their access and utilization of organizational skills. The ability of low field-independent and high field-independent thinkers to analyze, organize and reorganize content and textual information, and to go beyond the information given when processing information from symbolic material appears to be evident. It appears that High Field-Independent thinkers are better able in: intellectual functioning, as in thinking and problem solving; as in written composition; and then use that restructured content and textual information in writing comprehension. Apparently, high field-independent thinkers were more successful in accessing and using prior knowledge about content and textual schemata than low field-independent thinkers. Therefore, high field-independent thinkers were more able to construct meaning, organize, and express ideas than low field-

independent thinkers. It can be argued that the differences in the ways low field-independent and high field-independent thinkers analyze, organize, and reorganize, and process incoming information about the content and textual schemata, contributed to the significant differences in writing comprehension between them. Understanding the influences of cognitive styles on students' ability to effectively write can provide valuable information about their individual differences in writing achievement.

Chapter V

DISCUSSION AND CONCLUSION

The premise for this study was based upon the theory that cognitive styles are reflected in all areas of intellectual behavior, assumed that cognitive styles are reflected in written composition. Since writing comprehension is a complex intellectual behavior, it follows that cognitive styles are reflected in the written composition. Cognitive styles are marked as a greatly enlarged individual differences dimension, conceived as an articulated versus global field approach dimension, that extends across both perceptual and intellectual activities (Witkin *et al.*, 1971).

Cognitive style theory resulted from the extensive research of Witkin, 1978; Witkin *et al.*, 1971; Witkin *et al.*, 1977; Witkin *et al.*, 1979, which claim that there are two different cognitive styles: field-dependent and field-independent. These field-dependent and field-independent cognitive styles are contrasting modes of processing information in a continuum. The person with a field-dependent cognitive style is more global or more likely to follow the field as presented and is less articulated in the ability to analyze and structure the field. The person with a field-independent cognitive style who is more articulate in the ability to analyze and structure the field; and is less global or less likely to follow the field as presented. A person with a field independent cognitive style is more competent in cognitive restructuring skills than a person with a field-dependent cognitive style.

The present study identified relationships between cognitive styles and written composition of ninth grade students in a metropolitan school district in western Michigan. Specifically the study examined the hypothesis: (1) that high field-

independent thinkers will demonstrate higher raw scores on the writing comprehension of the MEAP Eighth Grade Writing Test than low field-independent thinkers.

This hypothesis was based on the assumption generated by the cognitive style theory which states:

(1) Field-independent persons are more likely to be high in cognitive restructuring skills than field-dependent person. (2) Field-independent people are more likely to use the mediation processes of analyzing and structuring to overcome the organization of the field when presented with a field having a dominant organization than field-dependent people (3) Field-independent individuals are more able to go beyond the information given, when processing information. This applies both to an immediately present stimulus configuration, as in perception, or the symbolic material, as in intellectual functioning. An example, as in thinking and problem solving. (4) In hypothesis-testing for concept attainment, field-independent people tend to use a hypothesis-testing approach in which active restructuring is required, and field-dependent people are more likely to use a spectator approach in which the properties of the stimulus arrangement itself play a dominant role. (5) In cue salience to hypothesis-testing for concept attainment, field-dependent individuals are dominated by the salient attribute of the stimulus and tend to ignore the nonsalient attribute of the cues in constructing guesses about the concept definition. In other words, Field-

independent individuals sample more fully from cues available and restructure the field as required by the task (Goodenough, 1976; Witkin, 1978; Witkin et al., 1977).

The procedure included testing 200 ninth grade subjects in six high schools in a metropolitan school district in western Michigan, with the Group Embedded Figures Test (GEFT). The subjects were categorized as low field-independent or high field-independent based on their performance on the GEFT. Two groups were selected for the study consisting of 200 subjects, one low field-independent and the other high field-independent.

In looking at the cognitive style category raw scores, it is noteworthy that low field-independent raw scores ranged from 0 to 3 (Appendix E, Table 5) and high field-independent raw scores ranged from 4 to 16 (Appendix E, Table 6). The breakdown of raw scores for field-dependent-independent are as follows: 0 to 9 in men and 0 to 8 in woman are indicative of extreme field dependence; scores from 10 to 12 in men and 9 to 11 in women for field-dependence, scores from 13 to 15 in men and 12 to 14 in women for field-independence; and scores from 16 to 18 in men and 15 to 18 in women for extreme field-independent. What is noteworthy is the number of subjects by definition, falling into the field-dependent category (195 out of 200); and for extreme field-independence, (3 out of 200) (Appendix E, Table 6). Only 3 subjects fit the category of field-independent according to the cognitive styles category. Therefore, there are strong implications for teaching to the cognitive domains of students.

The MEAP Eighth Grade Writing Test provided the measure for writing comprehension. Analyses of one-way ANOVA were performed to determine whether

these were statistically significant differences between low field-independent and high field-independent thinkers in writing comprehension.

There is reason to conclude, based on the evidence collected from this study, that there are cognitive styles manifested in written composition. The data also suggested that writing comprehension is likely to differ remarkably as a function of cognitive styles. The writing comprehension, as measured by the MEAP Eighth Grade Writing Test, were higher for high field-independent subjects than for low field-independent subjects. Details of these findings are presented in the discussion which follows.

General Observations

The characterization of the difference between field-dependent and field-independent cognitive styles in the utilization of mediational processes such as analyzing and structuring have important implications for cognitive processes. The tendency to function in a more field-dependent or field-independent fashion, influences the manner in which the person deals with a variety of cognitive tasks that require analysis and structuring. Some examples would be: in the processing of information, both from an immediately present stimulus configuration, as in perception, or from symbolic material, as in intellectual functioning, as in thinking and problem solving. That field-independent people are more likely to use a cognitive restructuring approach than field-dependent people has been shown by many studies, which used a variety of perceptual and problem solving tasks requiring restructuring (Witkin, 1977). Field-dependence-independence is related much more closely to how people learn than to how much is learned. This characterization of the field-dependent and field-independent cognitive styles has important implications for learning and memory processes (Goodenough, 1976; Witkin,

1978; Witkin et al., 1971).

The MEAP Eighth Grade Writing Test was the measure of writing comprehension utilized in this study. The writing test scores were the specific scores used. The writing test scores were designed to evaluate how well a student will be able to communicate effectively in written, visual and spoken language. The test was written to meet the Michigan Essential Goals and Objectives for Writing that speaks to:

as a process of making meaning; writing should be taught in the framework of the writing process; prewriting, drafting, revising, proofreading, and publishing; writing takes place within specific situations; writing is both cooperative as well as individualistic; meaning that a writer composes arrows out of a set of understanding about language and community that is shared by the writer and his or hers potential readers. The test was written to reflect the new definition of writing adopted by the Michigan State Board of Education (1989).

The most distinctive feature of field-dependent individuals is that they are low in cognitive restructuring skills. Field-dependent people are less articulated in the ability to analyze and structure the field, and they are more global, or more likely to follow the field as given. The data in this study demonstrates that writing comprehension is lower in low field-independent thinkers than in high field-independent thinkers. Using cognitive style theory to explain the observed difference in scores it can be argued that low field-independent thinkers scored lower in writing because they are low in cognitive restructuring skills, thus are less likely to generate ideas that are clearly written and well

supported; organize ideas, and make smooth transitions; vary word choice and expression according to the audience and purpose; and demonstrate control of grammar, spelling, and conventions on their own. Consequently, low field-independent thinkers are less able to go beyond the information given in the processing of information from symbolic material, as in intellectual functioning, as in thinking and problem solving, and specifically when writing. Since low field-independent thinkers seem to make less use of analyzing and structuring when writing it is possible that they are less able to generate or construct meaning in writing on the MEAP Eighth Grade Writing Test and thus lower scores.

The most distinctive aspect of field-independent individuals is that they are high in cognitive restructuring skills. That is, field-independent people are more articulate, or high in the ability to analyze and structure the field; they are less global, or less likely to follow the field as given. As a result the data in this study indicates that writing scores are higher in high field-independent than in low field-independent thinkers. Applying the cognitive style theory to explain the observed difference in scores it can be argued that high field-independent thinkers scored higher in writing because they are high in cognitive restructuring skills.

They are more likely to analyze and structure the field on their own. Thus, field-independent thinkers are more able to go beyond the information given in the processing of information from symbolic material, as in intellectual functioning, thinking and problem solving, and specifically when writing. Since high field-independent thinkers seem to make use of such mediational processes as analyzing and structuring when writing, it is possible that they are more able to generate or construct meaning in writing

on the MEAP Eighth Grade Writing Test and thus achieve high scores.

Specific Observations

The research hypothesis for the measure of written comprehension stated that high field-independent thinkers demonstrate higher raw scores in writing of the MEAP Eighth Grade Writing Test than low field-independent thinkers. The corresponding null hypothesis was that high field-independent and low field-independent thinkers demonstrates no statistical significant difference in the raw scores on writing of the MEAP Eighth Grade Writing Test.

A one-way ANOVA was used to compare the mean scores on the writing measure according to high and low field-independent cognitive styles categories. The analysis of the data revealed a statistically significant difference for the measure of writing of the MEAP Eighth Grade Writing Test. $F(1,198)= 214.62$, $P < .05$ between low field-independent and high field-independent groups. Thus, on the measure of written composition from the MEAP Eighth Grade Writing Test, the null hypothesis that the population measure were equal for low field-independent and high field-independent thinkers was rejected. The research hypothesis which stated that there were differences in the mean of the raw scores in writing of the MEAP Eighth Grade Test for low field-independent and high field-independent thinkers was accepted. The difference between the sample means reflected a true difference between the population means.

A comparison of the sample means demonstrated a difference between the two cognitive styles categories. The mean score for the high field-independent thinker was 8.29 points higher than the mean score for the low field-independent thinkers for the raw scores in writing on the MEAP Eighth Grade Writing Test. Specifically, the group means

for writing as measured by the MEAP Eighth Grade Writing Test, demonstrated that high field-independent thinkers scored higher than low field-independent thinkers on the measure of writing.

A wide range of perceptual and problem-solving dimensions require skills in cognitive restructuring. Concept attainment is a restructuring dimension that has been linked to field-independence. In concept-attainment problems, the subject attempts to distinguish between exemplars and nonexemplars of the concept to be learned. Concept attainment is a restructuring dimension that has been linked to field-dependence-independence in terms of the approaches to hypothesis-testing and to the effects of cue salience in such learning processes as hypothesis testing, recall and recognition, stimulus generalization, and transfer of training (Goodenough, 1978; Witkin, 1978; Witkin *et al.*, 1977).

The cognitive style theory on hypothesis-testing in concept attainment, suggests that high field-independent thinkers scored higher than low field-independent thinkers on the writing items on the MEAP Eighth Grade Writing Test, because they utilized a hypothesis-testing approach and actively abstracted general principles and mediating concepts when writing. Since they actively construct information during writing, high field-independent thinkers apparently have greater access to constructing, analyzing and organizing their thoughts. Low field-independent thinkers, however, are more likely to use a spectator, passive approach to constructing, analyzing and organizing their thoughts. Thus they apparently have less access to the structure of organizing an expressing their ideas.

In terms of the cognitive style theory on cue salience in concept attainment, high

field-independent thinkers, presumably, were better able than low field-independent thinkers to analyze, organize, and reorganize information of high or low levels of importance when writing. In the case of low field-independent thinkers, however, there is the leading tendency to be interactive, not attributive. In other words, depending on the topic to be written about, low field-independent thinkers were not as able to write from a distance or outside the field, rather they were dominated and interacted within the field. It is possible that high field-independent thinkers were able to actively construct meaning and use their knowledge and experiences to generate ideas in order to create meaning. High field-independent thinkers were better able to make judgements about idealized readers' backgrounds, and make decisions about ways to express their ideas so that readers think or act in a certain way. Whereas with low field-independent thinkers, it seems they were less able to make judgements and decisions about ways to express their ideas. The result is that low field-independent thinkers had less background information when answering constructing meaning test items of the MEAP Eighth Grade Writing Test and thus their lower.

Educational Implications

Findings of this study indicates that attributes of high cognitive restructuring ability and the use of hypothesis-testing approaches to concept attainment are reflected in the writing comprehension of high field-independent thinkers; and that attributes of low cognitive restructuring ability and use of spectator approaches to concept attainment are more prevalent in the writing comprehension of low field-independent thinkers. Based on this evidence, it is recognized that there are cognitive styles manifested in written composition. Since high field-independent thinkers analyze, organize, and reorganize

information from symbolic material differently; there is an implication that they would carry out the various intellectual processes differently.

These outcomes are of practical interest to educators and others concerned with education. Cognitive styles may have potential significance for curriculum design and teaching strategies in relation to the development of writing competence. The following is an attempt to speculate as to the relationships of cognitive styles and the development of writing competence.

It is important to note that writing comprehension competence for the purpose of this study is based on the writer's linguistic knowledge, his or her knowledge of the world, and to the extent in which that knowledge is activated during writing. Writing comprehension is a constructive process, a discovery process, in which meaning is derived from the prior experience and background knowledge of the writer. Therefore the better a writer is able to access background knowledge about either the content or the textual schemata of the topic, the better he or she will be able to generate meaning while they write. Indeed, learning to write is one of the most important achievements an individual must attain.

The Michigan State Board of Education adopted Standards for writing to enable students to generate and construct meaning, organize and expresses ideas clearly, use style, voice, and grammar effectively. Therefore, writing comprehension is pursued across curricula. The relationship between cognitive styles and the writing curriculum is most critical in the earliest years, for in these years the learner's specific cognitive style is being developed as a result of schooling and also as a result of the mother-child interactions(Campbell, 1973; Ramirez and Castaneda, 1974).

There are clear age-related changes in field-dependence over the life span. Developmental curves for the EFT, RFT and BAT, covering the 8- to -24 year period, show a marked, continuous increase in field-independence between 8 and about 15 years, although in this period the rate of change slows down with increasing age (Witkin, Goodenough and Karp, 1967).

As the curriculum advances and the learner becomes older than 15 years, the cognitive style development levels off and approaches a plateau in the period of young adulthood (Witkin, Goodenough and Karp, 1967). At this stage, this relationship of cognitive styles and curriculum swings more in the direction of cognitive styles, facilitating or inhibiting writing comprehension achievement.

A direct implication from this research concerns the provision of structure for writing. All learners seem to profit from structure, but low field-independent thinkers will benefit the most. Low field-independent individuals require structure and well organized material which present information clearly and logically. High field-independent individuals are more likely to impose organization and seem to learn best when free to do this. Advanced organizers, outline, purpose setting questions, etc. are all structures that should help students know how to use certain processes or strategies for better writing.

It is important for teachers to show their students how to organize, and put their oral ideas on paper to generate meaning. Students need to be taught organizational skills and the study skills of outlining and summarizing. These skills will help low field-independent students who need structure for learning, and teachers can provide more explicit instruction in problem solving strategies or more exact definitions of performance.

Classroom teachers need to provide more writing opportunities, ungraded, to create an expectation and desire among students. Writing suggestions can include: Family reunions; buddy assignments; revision -using newspaper journalist of who? what? when? how? why?; Pen pal letter writing; engage the voice each person brings to the classroom and negotiate with students the rules of that engagement; and class and small group discussion before each writing assignment.

There is the need to move from redefining ethos in writing. We must move from “How should I appear to be so that I can persuade?” to an ethos that ask, “what essential aspects of who I am do I want to make present in my text?” And then, “Given the circumstance of this text and this audience, how can I present those aspects? How can I be who I feel I need to be?”

A training component for teachers to be effective in producing more effective writers is vital.

A Breakdown occurs between writers and instructors at the level of language use. Students are using oral conventions to inform their writing while instructors are expecting the conventions of the written language of wider communication. Many times student writers become discouraged when they receive feedback that indicates their writing is unclear. Instructors who are informed about linguistic/cultural diversity will be better able to facilitate students' development in academic writing. It may be helpful for teachers to point out to students that some of their rhetorical choices are influenced by their socio-cultural orientation. Direct instruction though contrasting the academic discourse style of explicit writing to the AAVE indirect discourse style would prove most helpful for AAVE students.

When language arts teachers are not trained in language variation for cultural variety, they are ill-equipped to determine that disparate language characteristics are different and not language distortions or mental deficiencies. But when they understand and recognize the systematic language based features of AAVE, they can give due recognition to cultural and linguistic differences while assisting the students' entry into effective mainstream communication. As noted by Richardson (1996), instructors/tutors with more cultural/linguistic diversity training have a higher level of interpretive ability. AAVE cultural orientation does influence students' language use. Conversely, instructors socialization and training in the language of the dominant culture influences their reading strategies. Instructors need a broader familiarity with diverse stages of written literacy acquisition. The notion that there is cultural conflict between what AAVE students are intending to express and how these intentions are realized by writing instructors must be addressed. After all teachers must recognize the point that they are teaching African American students who are bidialectal, bicultural, and bicognitive and they need teachers who value those realities.

Limitations of the Study

There were some limitations in this study which might be taken into consideration when making conclusions, inferences, and generalizations of the findings. A median score of two from the Group Embedded Figures Test (GEFT) raw scores was the criterion used to form two categories of cognitive styles low field-independent and high field-independent. In order to illustrate that low field-independence and high field-independence had some impact upon writing comprehension, it was necessary to use GEFT raw scores of 0-3 for low field-independent (N=105) and GEFT raw scores of 4-16

for high field-independent (N=95) groups. As a result of using these scores, the high field-independent group had a smaller sample that included subjects with mixed cognitive styles characteristics. In this study, only one subject was at the high field-independent extreme range of scores on the GEFT as showcased in Appendix E, Table 6. A comparison, using a group of subjects at the extreme high field-independent range of scores on the GEFT with equal sample as the low field-independent cognitive style group, would have been preferred to identify individual difference in writing comprehension. The results of this study, in spite of these limitations, did not appear to have been influenced by the criterion used to form the two categories of cognitive styles. A replication of this investigation is recommended, utilizing an equal sample of subjects from extreme low field-independent and extreme high field-independent range of scores on the GEFT.

Directions for Future Research

The ability to communicate in spoken and written language is not an academic luxury, rather, it has become an absolute prerequisite.

Since students are expected to be able to write mostly in expository texts, further studies may focus on the reception of AAVE discourse patterns in expository texts. The employment of long term ethnomethodological observations of writing instructors' interacting with developing AAVE student writers may prove informative. Also, studies to investigate the contributing factors for ability to restructure the field among students of the same cognitive domain may prove to be beneficial. And, by doing so, we may strengthen our approaches to teaching written communication. Thus, providing additional information to impact student learning.

Conclusion

This study was an attempt to provide insight into the relationship between cognitive styles and written composition. The results provided further evidence for the existence of two distinct modes of cognition: low field-independent and high field-independent. The results of the comparison of the low field-independent and high field-independent groups demonstrated that cognitive styles are manifested in certain aspects of writing comprehension.

Specifically, the present study found that there are relationships between cognitive styles, as classified by the Group Embedded Figures Test, and written composition. More specifically, the findings of this study revealed that the raw scores on the writing comprehension as measured by the MEAP Eighth Grade Writing Test, were higher in high field-independent thinkers than in low field-independent thinkers. For example, high field-independent thinkers are higher in ability to organize, analyze, and structure the field; less global, or less likely to follow the field as given. On the other hand low field-independent thinkers are low in the ability to organize, analyze and structure the field and more global or more likely to follow the field as given.

There are still questions to be answered, which justifies further investigation concerning the existence of individual differences in processing styles and their important implications for learning and cognitive processes, and how these differences relate to writing processes and to writing comprehension.

APPENDIX A

**Characteristics Of Field-Independent And Field-Dependent Cognitive Styles
And Michigan Education Assessment Program (Meap) Eighth Grade Writing Test:
Student Report And Parent Report**

TABLE 1

CHARACTERISTICS OF FIELD-INDEPENDENT AND FIELD-DEPENDENT
COGNITIVE STYLES THAT ARE RELEVANT TO THE LEARNING PROCESS

Field-dependent	Field-independent
1. Imposed organization on unstructured field.	1. Take organization of field as given.
2. Have a sense of separate identity and internalized values and are independent of the social field.	2. Rely on others for self definition and differentiation and are attentive to social stimuli.
3. Sample fully from the nonsalient features of a concept in order to attain the relevant attributes and to form hypotheses.	3. Dominate by the most salient features of a concept in the attainment of the relevant attributes and in hypothesis formulation. Can sample fully from set of features if they are in discrete form.
4. Utilize the active approach to learning, the hypothesis testing mode.	4. Utilize the passive approach to learning, the intuitive mode.
5. Learning curve is continuous - no significant improvement in learning a new concept until the appropriate hypothesis is found, then sudden improvement.	5. Learning curve is continuous - gradual improvement as relevant cues are sampled. processing.
6. Use mnemonic structures and reorganize materials for more effective storage and retrieval of information	6. Use existing organization of materials in cognitive processing.
7. Less susceptible to inference from outside influences.	7. Particularly inference susceptible to social influence on test of conformity and suggestibility.
8. Learn to generalize to object and design concepts more readily.	8. Less effective in generalizations from original designs to variations on basis of common components.
9. Prefer to learn general principles and acquire them more easily.	9. Prefer to learn specific information and acquires it more easily.

10. Learn more in the absence of external reward and punishment when intrinsic motivations present.

11. Limited references to other's views may make field-independence impervious to helpful information.

12. Use wholist strategy.

13. Stress has less effect on memory.

14. Draw the human figure in a less articulated fashion.

10. Learn more under conditions of negative and social reinforcement.

11. Have greater recourse to external sources of information in arriving at attitudes and judgments.

12. Use partist strategy.

13. Stress tends to impair memory, threatening material more likely to be repressed.

14. Draw the human figure in a more articulated fashion.

Table 2

**MEAP Eighth Grade Writing Test - Description for
Standard Setting**

Proficient

A student who scores within the **proficient** range on the MEAP Grade 8 Writing Assessment:

- generates ideas that are focused and well supported
- organizes ideas and makes smooth transitions between them
- varies word choice and expression according to the audience and purpose
- demonstrates control of grammar, spelling, and other language conventions

TABLE 3

Michigan Educational Assessment Program			
Individual Student Report			
Student School District Test Date	Student No. Gender Ethnicity Birthdate	Feeder Research I Research II	
A			
Grade 8 Writing			
Overall Performance in Writing			
Score	Points Earned	Points Possible	B 4.0
Proficient	A score of 2.5 or above		
Not Yet Proficient	A score below 2.0		
Note: Written responses were evaluated by qualified scorers			

TABLE 4
PARENT REPORT

Student
Student Number
Grade
School
District

A

Dear Parent or Guardian:

Background

Your child took the Michigan Education Assessment Program (MEAP) eighth grade tests in science and writing. Each test is based upon the *Model Core Curriculum* approved by the State Board of Education in 1991. The science test has been designed to emphasize application and problem solving; the writing test emphasizes real world writing tasks.

In science, some of the questions ask students to provide their own answers; others ask students to select the correct answer from among those given. On the Science Test a score of 400 or above is described as Proficient. Scores of 350 to 399 is considered Novice. A score of 349 and below is considered Not Yet Novice. A novice score or a not yet novice score indicates partial attainment of knowledge and skills necessary for proficient performance.

The Writing Test does not have any multiple-choice questions. Each student is asked to write a response to a question. A score of 2.5 and above is needed for Proficient. A score of 2.0 and below is considered Not Yet Proficient.

Your Child's Overall Performance

	Proficient	Score	Overall Performance
Science			
Writing			

Your School's and District's Overall Performance

Percent Proficient	School	District
Science		
Writing		

How are the tests scored?

For each multiple-choice item on the science test, students select the one best answer from the four choices provided in order to get the item correct. Each multiple-choice item is worth one point and there is no penalty for guessing. These items are machine scored. In addition, the science test has test items where the student must provide a written response in order to answer the test question. Like the writing test, these items cannot be scored by a machine and therefore require handscoring.

Extensive experience and research have refined and validated the critical steps that ensure consistent handscoring. Requirements include the follow:

- Scorers must have, at a minimum, a college degree.
- Before they are permitted to score student responses, scorers receive extensive training and must pass a rigorous qualifying test.
- During scoring, periodic "quizzes" are given to ensure scorers are applying criteria in the same way.
- Each response is evaluated independently by at least two scorers.
- If the first and second scores are different by more than one score point, a third, more experienced scorer is brought in; however, training and qualifying are so thorough that third readings are rarely required.
- Scorers do not see the names of locations of students.
- Scorers are trained to ignore extaneous factors such as penmanship

APPENDIX B

**Instructions For Taking The GEFT
(Witkin, et . al . 1971. p 27-28)**

Directions

Distribute test booklets and pencils. As soon as the identifying information on the cover page has been filled in, the Examiner says: "Now start reading the Directions, which include 2 practice problems for you to do. When you get to the end of the Directions on Page 3, please stop. Do not go beyond Page 3." Proctors should circulate in the room making sure subjects are doing the two practice problems correctly and that they do not turn past Page 3.

When all subjects have finished reading the Directions on Page 3, E says: "Before I give the signal to start, let me review the points to keep in mind." (Read the statements at the bottom of Page 3, stressing the necessity for tracing all lines of the Simple Form, including the inner lines of the cube, simple form "E", as well as for erasing all incorrect lines.)

"Are there any questions about the directions?" (E should pause to allow questions.)
"Raise your hand if you need a new pencil during the test."

E then says: "When I give the signal, turn the page and start the First Section. You will have 2 minutes for the 7 problems in the First Section. Stop when you reach the end of this section. Go ahead!" This section is primarily for practice with the format of the test. Proctors should circulate and give additional explanations to those who seem to be having difficulty with this set of practice items.

After 2 minutes E says: "Stop-Whether you have finished or not. When I give the signal, turn the page and start the Second Section. You will have 5 minutes for 9 problems in the Second Section. You may not finish all of them, but work as quickly and accurately as you can. Raise your hand if you need a new pencil during the test. Ready, go ahead."

After 5 minutes E says: "Stop-Whether you have finished or not. When I give the signal, turn the page and start the Third Section. You will have 5 minutes for the 9 problems in the Third Section. Raise your hand if you need a new pencil during the test. Ready, go ahead."

After 5 minutes E says: "Stop-Whether you have finished or not. Please close your test booklets."

APPENDIX C

Letters of Transmittal Sent To School Personnel

**Cathy Large
2633 Brooklane S.E.
Grand Rapids, MI 49507**

March 12, 1997

**Interim Superintendent
Office of the Superintendent
Grand Rapids Public Schools
1331 Franklin S.E.
Grand Rapids, MI 49506**

Dear Mr. O'Neill:

I am currently enrolled in the doctorate program in Curriculum and Instruction at Wayne State University. At this point my dissertation proposal has been approved by my doctoral committee and I am ready to proceed with my study.

The topic of for dissertation is Relationships Between Cognitive Styles And Written Composition of African American Ninth Grade Students In The Grand Rapids Public Schools.

In this study I would like to engage ninth grade students at the four comprehensive high schools and as well as Park and City as subjects. Their involvement will consist of taking the Group Embedded Figure Test (GEFT) to identify their cognitive style. This is a group test that consumes twenty minutes. Please advise me if this is possible. I assure you that there will be no further interruption to neither staff nor students. Also, a letter asking permission will be sent home to the parents of the participating students. Further, all ethical standards of research protocol will be followed and the students' anonymity will be preserved at all times.

If it is conceivable for me to conduct the above study, I would need certain information as soon as possible in order to begin. This information consists of the 1995-96 Michigan Education Assessment Program (MEAP) Eighth Grade Writing Test scores of the students selected to participate in this study. Please also advise me on how I might obtain this information.

Thank you, in advance, for your time and attention.

Sincerely,

**Cathy Large, Director
Multicultural Services
Cathy Large**

2633 Brooklane S.E.
Grand Rapids, MI 49507

March 12, 1997

Supervisor Of Evaluation
Office of Research and Evaluation
Grand Rapids Public Schools
1331 Franklin S.E.
Grand Rapids, MI 49506

Dear Mrs. Arpin:

As per our telephone conversation on March 5, 1997, I am awaiting permission to proceed with my project with the cooperation of the selected ninth grade students at the four comprehensive high schools as well as Park and City. At that time you requested certain information pertinent to the project. Please find enclosed herewith the permission letter going to parents, a copy of the Group Embedded Figures Test (GEFT) and the following clarification of the project.

The Group Embedded Figures Test (GEFT) will be given in order to determine the cognitive style and preferred learning modality of the ninth grade students.

The students' records will be assessed to secure the Michigan Education Assessment Program (MEAP), Eighth Grade Writing Test scores for 1995-96.

The group's scores will be subjected to statistical analysis and the results will be applied to my research for the degree of Doctor of Education from Wayne State University.

The purpose of this study is to identify the cognitive style or preferred learning modality among ninth grade students, to determine whether there is any relationship between the cognitive style or preferred modality of learning possessed by a student and the level of achievement in writing.

Thank you, in advance, for your kind cooperation.

Sincerely,

Cathy Large, Director
Multicultural Services

Cathy Large
2633 Brooklane S.E.

Grand Rapids, MI 49507

Mr. Charles Sturdivant
Facilitator of Secondary Education
Grand Rapids Public Schools
1331 Franklin S.E.
Grand Rapids, MI 49501

Dear Mr. Sturdivant,

I am matriculating at Wayne State University pursuing the degree Doctor of Education in the field of Curriculum and Instruction.

At this point I am waiting for approval from the Behavioral Institutional Review Board to begin testing of subjects.

The topic for my dissertation is: Relationships Between Cognitive Styles and Written Composition of African American Ninth Grade Students. In this study I would like to give the Group Embedded Figures Test (GEFT) to 200 African American ninth grade students attending the four comprehension high schools, Park and City. Therefore, I am requesting your support via announcing to principals my desire to test students at the identified schools.

Please inform me as to the way you wish for me to proceed.

I will keep you informed of the scheduling, test dates and times.

Thank you for your support.

Sincerely,

Cathy Large, Director
Multicultural Services

Cathy Large
2633 Brooklane S.E.
Grand Rapids, MI 49507
May 19, 1997

Principals: Secondary and Alternative Schools

Dear

Per our short conversation of last Thursday regarding the testing of ninth grade students, you will recall that I am waiting for the approval from Wayne State to conduct testing of human subjects.

As mentioned, the results will be used in my research pursuant to a degree of Doctor in Education from Wayne State University. I would like to assure you that the testing, which will be administered at the four comprehensive high schools and Park and City Alternative high schools, will be handled with minimal interruption to classroom procedure. It will be necessary for me to secure from you the advised time to meet with the ninth grade teachers for a period of ten minutes to inform them of the process I will use in administering the test. Also, a letter requesting permission will be mailed home to parents of students participating in this study.

I will inform you when approval has been granted by Wayne State University for me to proceed with testing of students.

Thank you for your support.

Sincerely,

Cathy Large, Director
Multicultural Services

APPENDIX D

Letter Requesting Parental Consent and Parental Consent Form

May 27, 1997

Dear Parent,

In March of 1996, your child was administered the 8th grade MEAP Writing Test.

While completing the Doctor of Education degree in Curriculum at Wayne State University, I am writing my dissertation on the Relationship Between Cognitive Style (preferred ways of processing information) and Written Composition of African American Ninth grade students. I am asking permission to include in the dissertation, your son or daughter's preferred way of processing information. Your child's name will not appear in this dissertation.

I will be happy to inform you of your child's cognitive style and what implication this has for classroom teachers to ensure more effective African American student writers.

Please complete the enclosed form to indicate whether you are willing to have your son or daughter be a part of this group test, to be included in this dissertation. There is a place for your child to sign the form as well. Feel free to call me at my office if you have any questions, 771-2016.

Respectfully,

Catherine Large
Director of Multicultural Education

PARENTAL CONSENT FORM

PROJECT TITLE: The Relationship of Cognitive Style and Written Composition of African American Eighth Grade Students.

RESEARCH: Catherine W. Large

PURPOSE: You are asked to allow your child to be administered a test to determine his or her preferred ways of processing information.

PROCEDURE: Two hundred ninth grade students will be given a test booklet that shows figures and shapes. The test has 3 sections. The first section will be a practice section. The second and third section will be scored. Students will be asked to trace a simple figure in a complex figure. This test will take approximately 30 minutes.

RISKS: There are no known risks.

BENEFITS: Your child may learn his/her preferred ways of processing information and teachers will be trained on African American students; preferred ways of processing information.

QUESTIONS: To request more information about this project please telephone me at the Multicultural Office of the Grand Rapids Public Schools, 771-2016.

To request information about human subjects' rights, please telephone Dr. Peter Lichtenberg, Chairperson, Wayne State University's Behavioral Investigation Committee, 313-577-5174.

Catherine Large

May the child's work be included? Yes _____
(This is voluntary. Your child will not be penalized if he/she does not participate.
You may withdraw your child from the project at any time without penalty.)

PARENT SIGNATURE: _____ **Date** _____

CHILD'S SIGNATURE: _____ **Date** _____

APPENDIX E

Tables

TABLE 1
 FREQUENCY DISTRIBUTION AND PERCENT OF RAW SCORES ATTAINED BY SUBJECTS
 ON GROUP EMBEDDED FIGURES TEST (GEFT)

Frequencies

GEFT	N		Mean	Median	Mode	Std. Deviation	Variance	Range	Minimum
	Valid	Missing							
	200	0	3.6150	3.0000	4.00	2.4794	6.1475	16.00	.00

Statistics

GEFT	Maximum
	16.00

GEFT

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
.00	12	6.0	6.0	6.0
1.00	27	13.5	13.5	19.5
2.00	34	17.0	17.0	36.5
3.00	32	16.0	16.0	52.5
4.00	35	17.5	17.5	70.0
5.00	25	12.5	12.5	82.5
6.00	12	6.0	6.0	88.5
7.00	11	5.5	5.5	94.0
8.00	6	3.0	3.0	97.0
9.00	1	.5	.5	97.5
10.00	1	.5	.5	98.0
11.00	1	.5	.5	98.5
12.00	2	1.0	1.0	99.5
16.00	1	.5	.5	100.0
Total	200	100.0	100.0	
	200	100.0	100.0	

TABLE 2
FREQUENCY DISTRIBUTION AND PERCENT OF SUBJECTS
BY AGE

Frequencies

Statistics

	N		Mean	Median	Mode
	Valid	Missing			
AGE	200	0	14.8350	15.0000	15.00

AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	14.00	57	28.5	28.5	28.5
	15.00	121	60.5	60.5	89.0
	16.00	21	10.5	10.5	99.5
	18.00	1	.5	.5	100.0
	Total	200	100.0	100.0	
Total		200	100.0		

TABLE 3

FREQUENCY DISTRIBUTION AND PERCENT OF SUBJECTS
BY SEX

Frequencies

Statistics

	N	
	Valid	Missing
SEX	200	0

SEX

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	masculine	83	41.5	41.5	41.5
	femenine	117	58.5	58.5	100.0
	Total	200	100.0	100.0	
Total		200	100.0		

TABLE 4

FREQUENCY DISTRIBUTION AND PERCENT OF SUBJECTS
BY COGNITIVE STYLE CATEGORY

Frequencies

Statistics

	N	
	Valid	Missing
FI	200	0

FI

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	low field independent	105	52.5	52.5	52.5
	high field independent	95	47.5	47.5	100.0
	Total	200	100.0	100.0	
Total		200	100.0		

TABLE 5

FREQUENCY DISTRIBUTION AND PERCENT
OF LOW FIELD-INDEPENDENT SUBJECTS
ON THE GROUP EMBEDDED FIGURES TEST

Frequencies

FI = low field independent

Statistics^a

	N		Mean	Mode	Std. Deviation	Variance	Range
	Valid	Missing					
GEFT	105	0	1.8190	2.00	.9979	.9958	3.00

a. FI = low field independent

GEFT^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid .00	12	11.4	11.4	11.4
1.00	27	25.7	25.7	37.1
2.00	34	32.4	32.4	69.5
3.00	32	30.5	30.5	100.0
Total	105	100.0	100.0	
Total	105	100.0		

a. FI = low field independent

TABLE 6

FREQUENCY DISTRIBUTION AND PERCENT
OF HIGH FIELD-INDEPENDENT SUBJECTS
ON THE GROUP EMBEDDED FIGURES TEST

FI = high field independent

Statistics^a

	N		Mean	Mode	Std. Deviation	Variance	Range
	Valid	Missing					
GEFT	95	0	5.6000	4.00	2.0803	4.3277	12.00

a. FI = high field independent

GEFT^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 4.00	35	36.8	36.8	36.8
5.00	25	26.3	26.3	63.2
6.00	12	12.6	12.6	75.8
7.00	11	11.6	11.6	87.4
8.00	6	6.3	6.3	93.7
9.00	1	1.1	1.1	94.7
10.00	1	1.1	1.1	95.8
11.00	1	1.1	1.1	96.8
12.00	2	2.1	2.1	98.9
16.00	1	1.1	1.1	100.0
Total	95	100.0	100.0	
Total	95	100.0		

a. FI = high field independent

TABLE 7

FREQUENCY DISTRIBUTION AND PRECENT OF LOW FIELD-INDEPENDENT
SUBJECTIS BY AGE AND COGNITIVE STYLE CATEGORY

FI = low field independent

Statistics^a

	N		Mean	Median	Mode
	Valid	Missing			
AGE	105	0	14.9810	15.0000	15.00

a. FI = low field independent

AGE^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 14.00	20	19.0	19.0	19.0
15.00	69	65.7	65.7	84.8
16.00	15	14.3	14.3	99.0
18.00	1	1.0	1.0	100.0
Total	105	100.0	100.0	
Total	105	100.0		

a. FI = low field independent

TABLE 8

FREQUENCY DISTRIBUTION AND PERCENT OF HIGH FIELD-INDEPENDENT
SUBJECTS BY AGE AND COGNITIVE
STYLE AND CATEGORY

FI = high field independent

Statistics^a

	N		Mean	Median	Mode
	Valid	Missing			
AGE	95	0	14.6737	15.0000	15.00

a. FI = high field independent

AGE^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 14.00	37	38.9	38.9	38.9
15.00	52	54.7	54.7	93.7
16.00	6	6.3	6.3	100.0
Total	95	100.0	100.0	
Total	95	100.0		

a. FI = high field independent

TABLE 9

FREQUENCY DISTRIBUTION AND PERCENT OF LOW FIELD-INDEPENDENT
SUBJECTS BY SEX AND COGNITIVE STYLE CATEGORY

Frequencies

FI = low field independent

Statistics^a

	N	
	Valid	Missing
SEX	105	0

a. FI = low field independent

SEX^a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	masculine	55	52.4	52.4	52.4
	femenine	50	47.6	47.6	100.0
	Total	105	100.0	100.0	
Total		105	100.0		

a. FI = low field independent

TABLE 10

FREQUENCY DISTRIBUTION AND PERCENT OF HIGH FIELD-INDEPENDENT
SUBJECTS BY SEX AND COGNITIVE STYLE CATEGORY

FI = high field independent

Statistics^a

	N	
	Valid	Missing
SEX	95	0

a. FI = high field independent

SEX^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid masculine	28	29.5	29.5	29.5
feminine	67	70.5	70.5	100.0
Total	95	100.0	100.0	
Total	95	100.0		

a. FI = high field independent

TABLE 11

GROUP MEAN, MEDIAN, MODE AND RANGE OF THE RAW SCORES OF SUBJECTS ON THE MICHIGAN EDUCATION ASSESSMENT PROGRAM EIGHTH GRADE WRITING TEST

Frequencies

Statistics

	N		Mean	Median	Mode	Std. Deviation	Variance	Range	Minimum
	Valid	Missing							
MEAP	200	0	23.2250	20.0000	20.00	5.7567	33.1401	25.00	10.00

Statistics

MEAP	Maximum	35.00
------	---------	-------

MEAP

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 10.00	11	5.5	5.5	5.5
15.00	11	5.5	5.5	11.0
20.00	80	40.0	40.0	51.0
25.00	35	17.5	17.5	68.5
30.00	62	31.0	31.0	99.5
35.00	1	.5	.5	100.0
Total	200	100.0	100.0	
	200	100.0		

TABLE 12

FREQUENCY DISTRIBUTION AND PERCENT OF RAW SCORES ATTAINED BY
LOW FIELD-INDEPENDENT SUBJECTS ON THE MICHIGAN EDUCATION
ASSESSMENT PROGRAM EIGHTH GRADE WRITING TEST

Frequencies

FI = low field independent

Statistics^a

	N		Mean	Mode	Std. Deviation	Variance	Range
	Valid	Missing					
MEAP	105	0	19.2857	20.00	4.2420	17.9945	20.00

a. FI = low field independent

MEAP^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 10.00	10	9.5	9.5	9.5
15.00	11	10.5	10.5	20.0
20.00	73	69.5	69.5	89.5
25.00	6	5.7	5.7	95.2
30.00	5	4.8	4.8	100.0
Total	105	100.0	100.0	
Total	105	100.0		

a. FI = low field independent

TABLE 13

FREQUENCY DISTRIBUTION AND PERCENT OF RAW SCORES ATTAINED BY
HIGH FIELD-INDEPENDENT SUBJECTS ON THE MICHIGAN EDUCATION
ASSESSMENT PROGRAM EIGHTH GRADE WRITING TEST

FI = high field independent

Statistics^a

	N		Mean	Mode	Std. Deviation	Variance	Range
	Valid	Missing					
MEAP	95	0	27.5789	30.00	3.7090	13.7570	25.00

a. FI = high field independent

MEAP^a

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 10.00	1	1.1	1.1	1.1
20.00	7	7.4	7.4	8.4
25.00	29	30.5	30.5	38.9
30.00	57	60.0	60.0	98.9
35.00	1	1.1	1.1	100.0
Total	95	100.0	100.0	
Total	95	100.0		

a. FI = high field independent

TABLE 14

MEANS, STANDARD DEVIATIONS, AND STANDARD ERROR FOR THE RAW SCORES ON THE WRITING MEASURE OF THE MICHIGAN EDUCATION ASSESSMENT PROGRAM EIGHTH GRADE WRITING TEST ACCORDING TO COGNITIVE STYLE CATEGORIES

		Descriptives						
MEAP	FI	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
						Lower Bound	Upper Bound	
	low field independent	105	19.2857	4.2420	.4140	18.4648	20.1066	10.00
	high field independent	95	27.5789	3.7090	.3805	26.8234	28.3345	10.00
	Total	200	23.2250	5.7567	.4071	22.4223	24.0277	10.00

		Maximum
MEAP	low field independent	30.00
	high field independent	35.00
	Total	35.00

Descriptives

TABLE 15

ONE-WAY ANALYSIS OF VARIANCE FOR THE RAW SCORES ON THE
 WRITING COMPREHENSION OF THE MICHIGAN EDUCATION
 ASSESSMENT PROGRAM EIGHTH GRADE WRITING TEST

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
MEAP	Between Groups	3430.289	1	3430.289	214.624	.000
	Within Groups	3164.586	198	15.983		
	Total	6594.875	199			

APPENDIX F

Figures

FIGURE 1

HISTOGRAM OF THE RAW SCORES ON THE
GROUP EMBEDDED FIGURES TEST
ATTAINED BY SUBJECTS

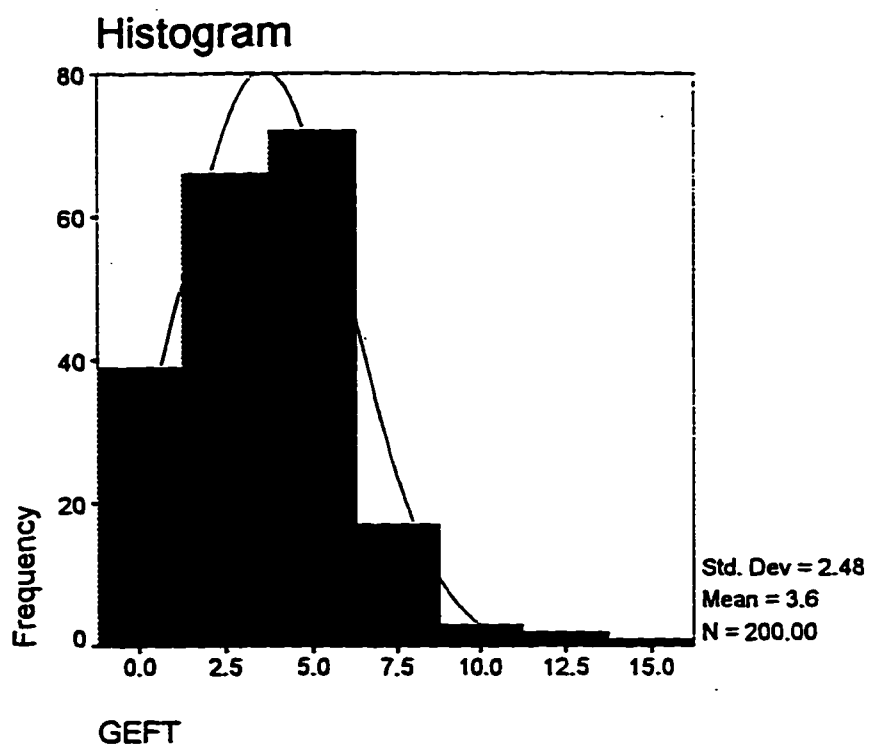


Figure 2

BAR CHART OF THE PERCENT OF SUBJECTS
BY AGE

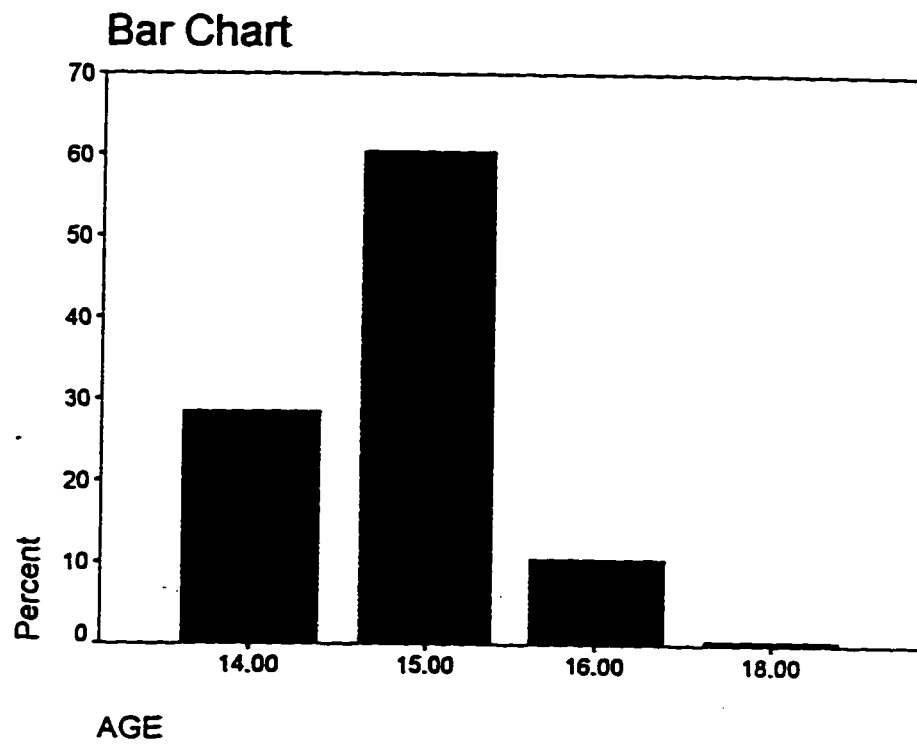
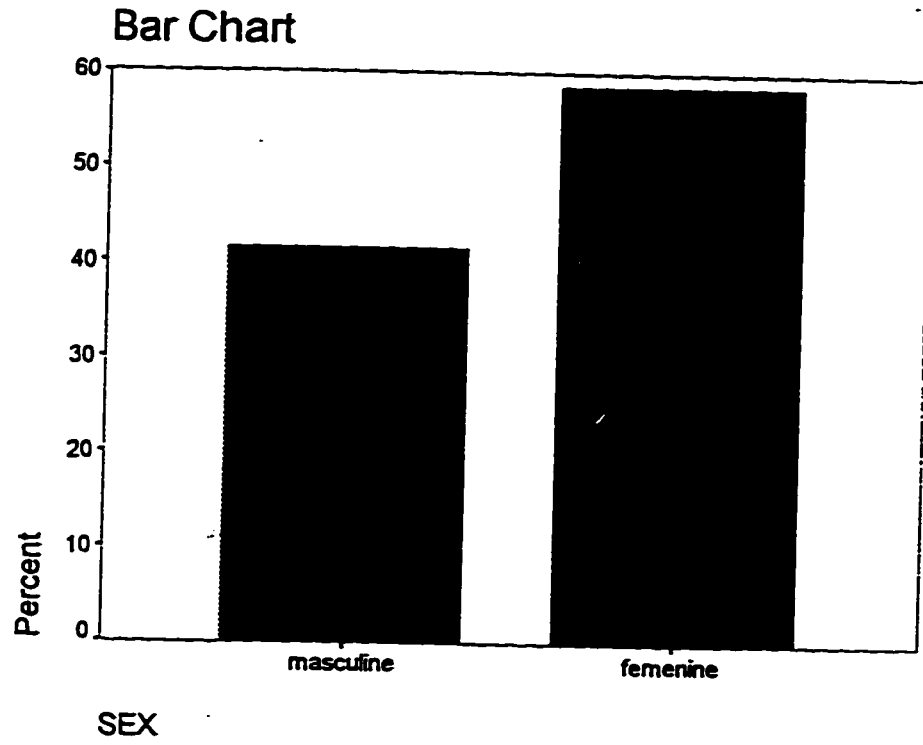


FIGURE 3

BAR CHART OF THE PERCENT
OF SUBJECTS BY SEX



FIGURES 4

BAR CHART OF THE PERCENT OF SUBJECTS
BY COGNITIVE STYLE CATEGORY

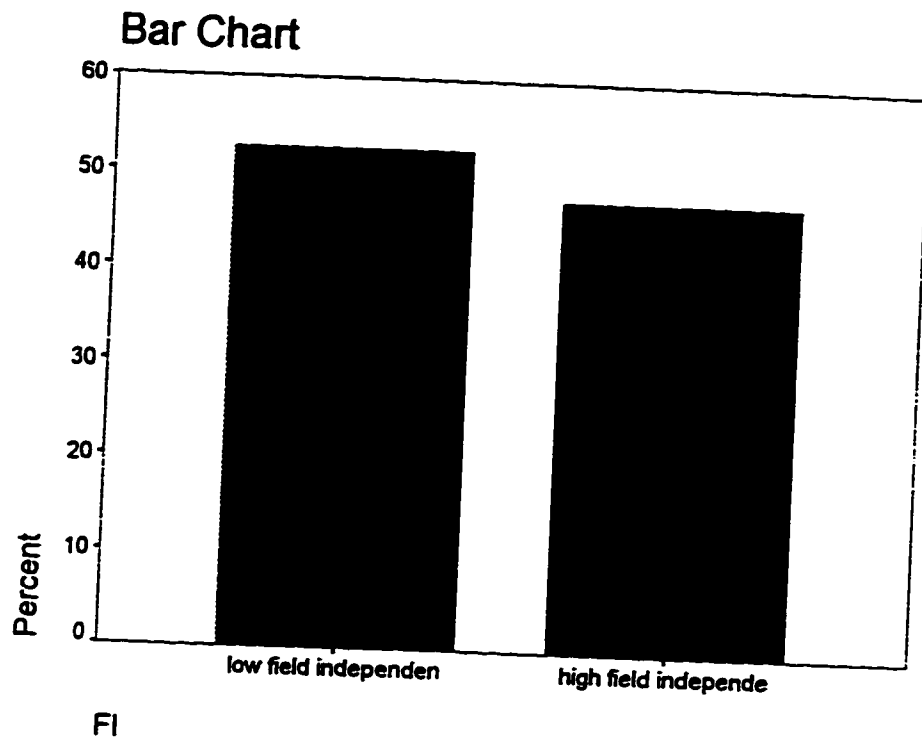
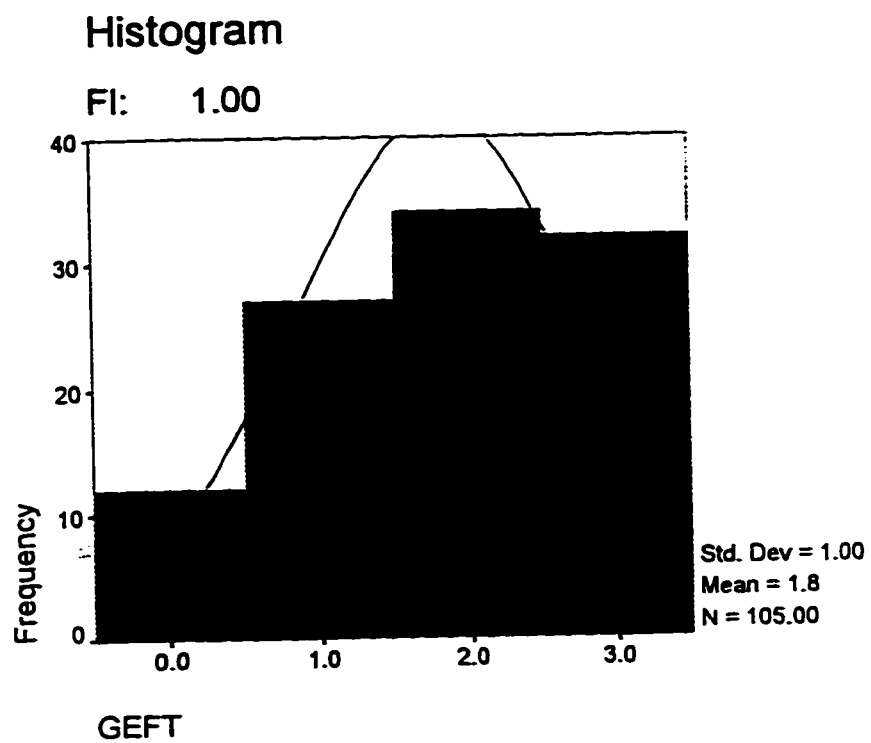


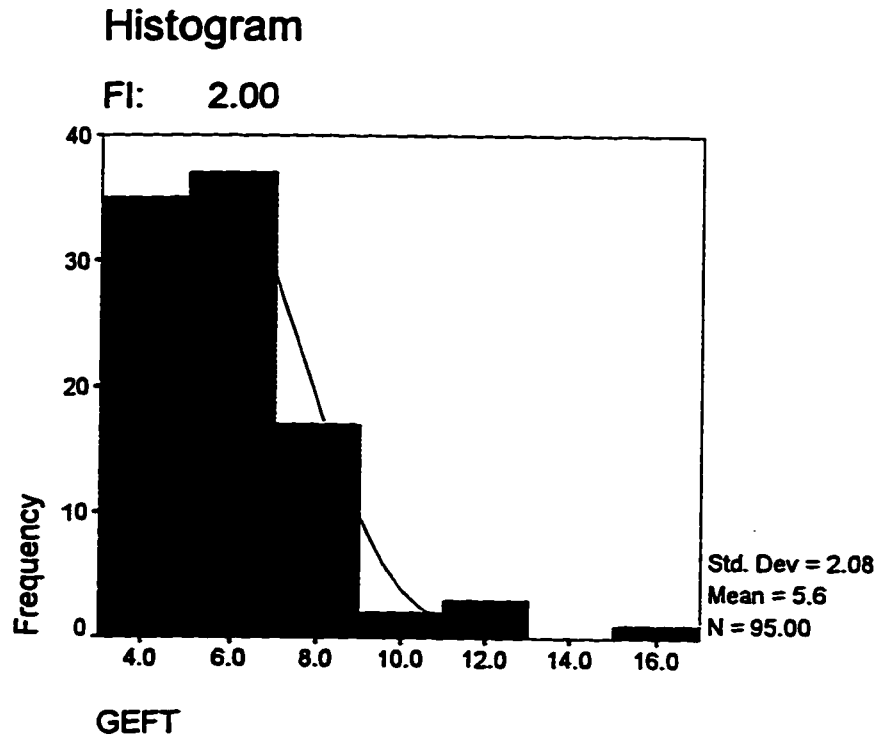
FIGURE 5

HISTOGRAM OF THE FREQUENCY DISTRIBUTION OF
LOW FIELD-INDEPENDENT SUBJECTS ON THE
GROUP EMBEDDED FIGURES TEST



FIGURES 6

HISTOGRAM OF THE FREQUENCY DISTRIBUTION OF
HIGH FIELD-INDEPENDENT SUBJECTS ON
THE GROUP EMBEDDED FIGURES TEST



FIGURES 7

BAR CHART OF THE PERCENT OF
LOW FIELD-INDEPENDENT
SUBJECT BY AGE

Bar Chart

Fl: 1.00 low field independent

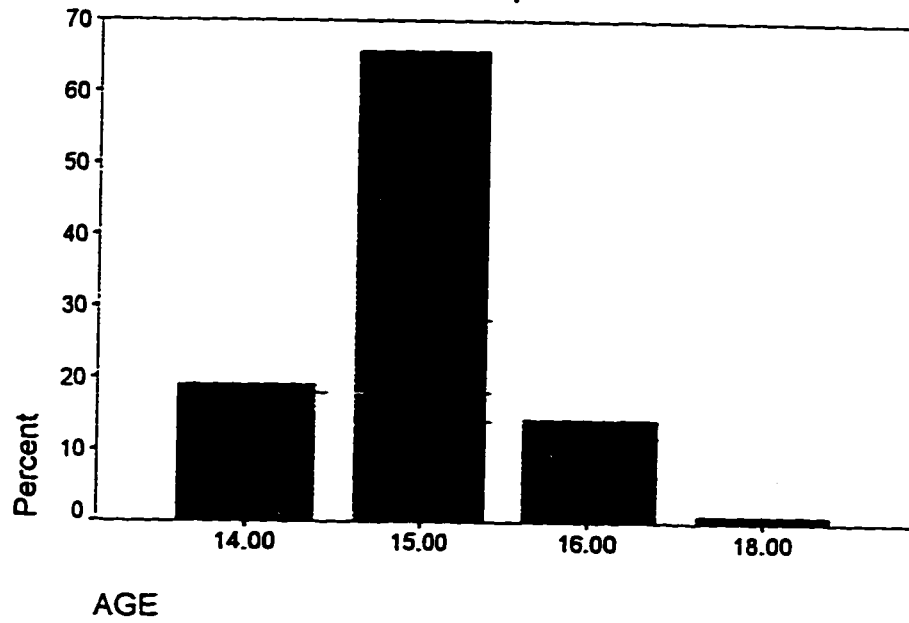


FIGURE 8

BAR CHART OF THE PERCENT OF
HIGH FIELD-INDEPENDENT
SUBJECTS BY AGE

Bar Chart

FI: 2.00 high field independent

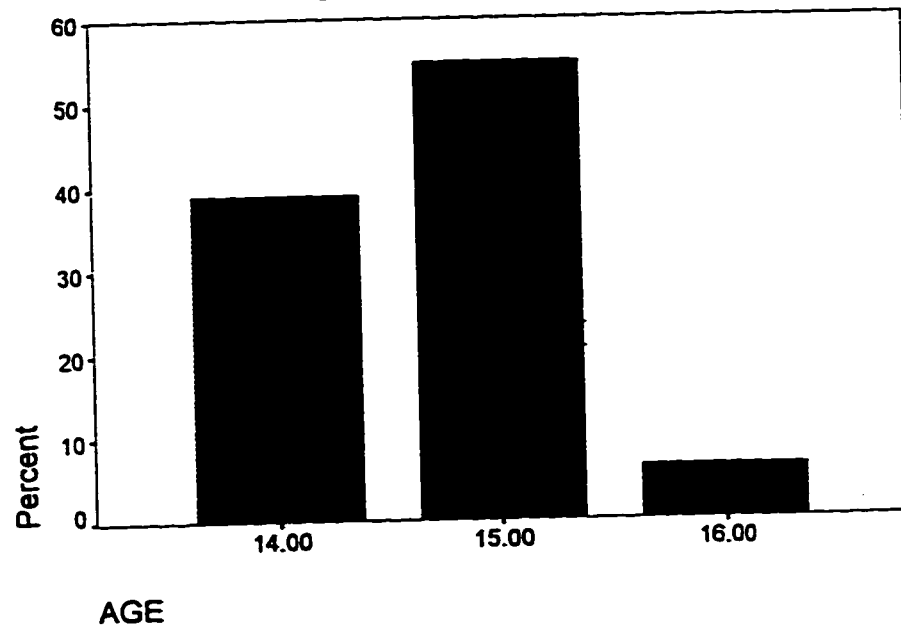


FIGURE 9

BAR CHART OF THE PERCENT OF
LOW FIELD-INDEPENDENT
SUBJECTS BY SEX

Bar Chart

FI: 1.00 low field independent

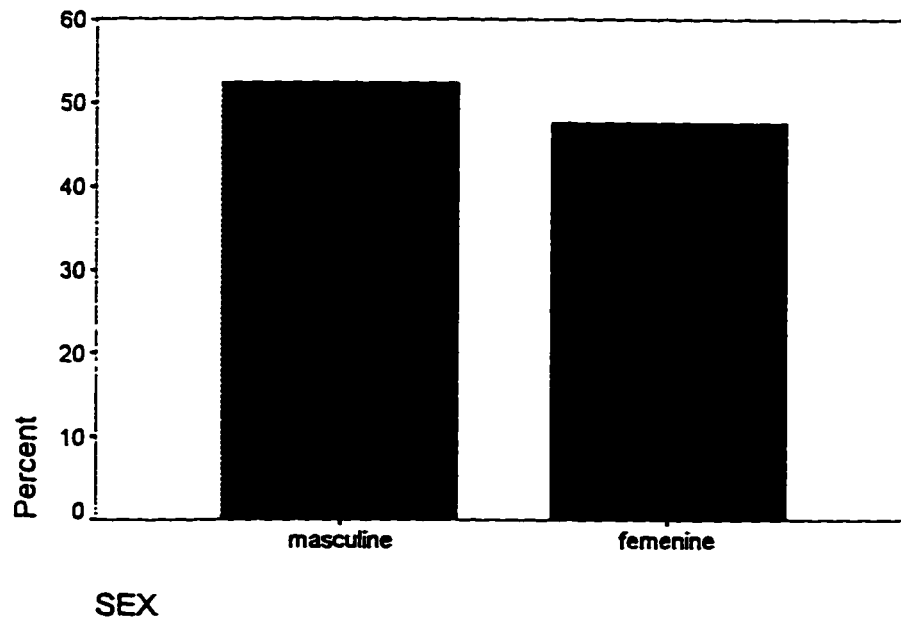


FIGURE 10

BAR CHART OF THE PERCENT OF
HIGH FIELD-INDEPENDENT
SUBJECTS BY SEX

Bar Chart

FI: 2.00 high field independent

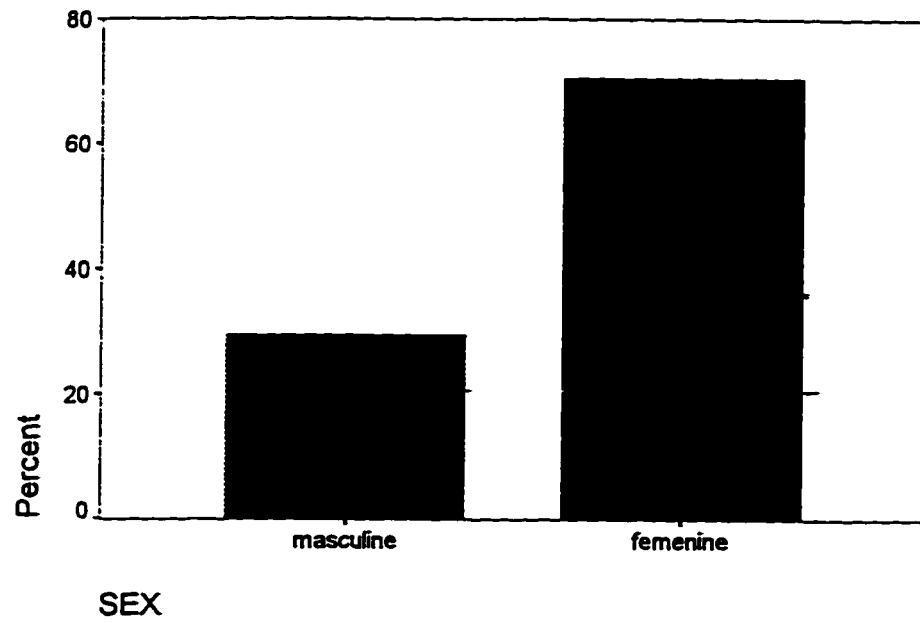


FIGURE 11

HISTOGRAM OF THE RAW SCORES ON THE MICHIGAN EDUCATION ASSESSMENT PROGRAM EIGHTH GRADE WRITING TEST ATTAINED BY SUBJECTS

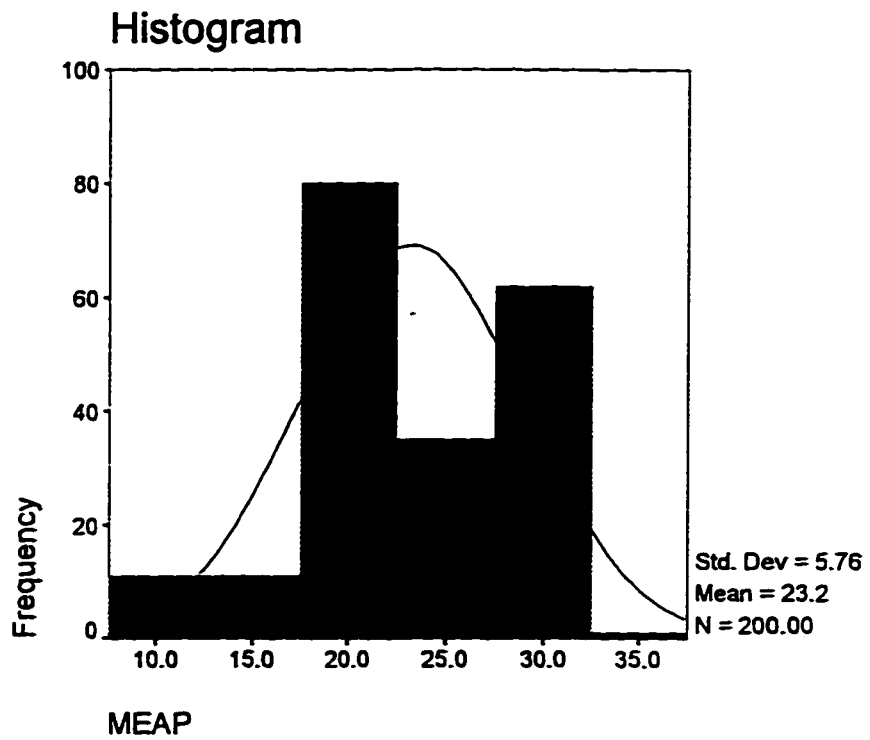


FIGURE 12

HISTOGRAM OF THE FREQUENCY DISTRIBUTION OF THE
RAW SCORES ON THE MICHIGAN ASSESSMENT PROGRAM
EIGHTH GRADE WRITING TEST ATTAINED BY LOW
FIELD-INDEPENDENT SUBJECTS

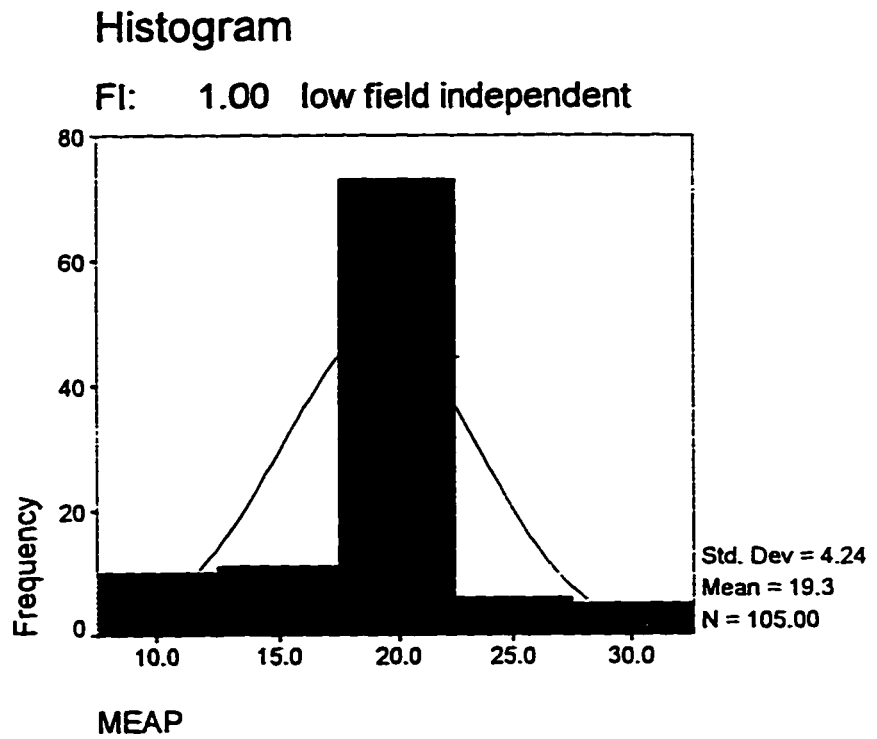
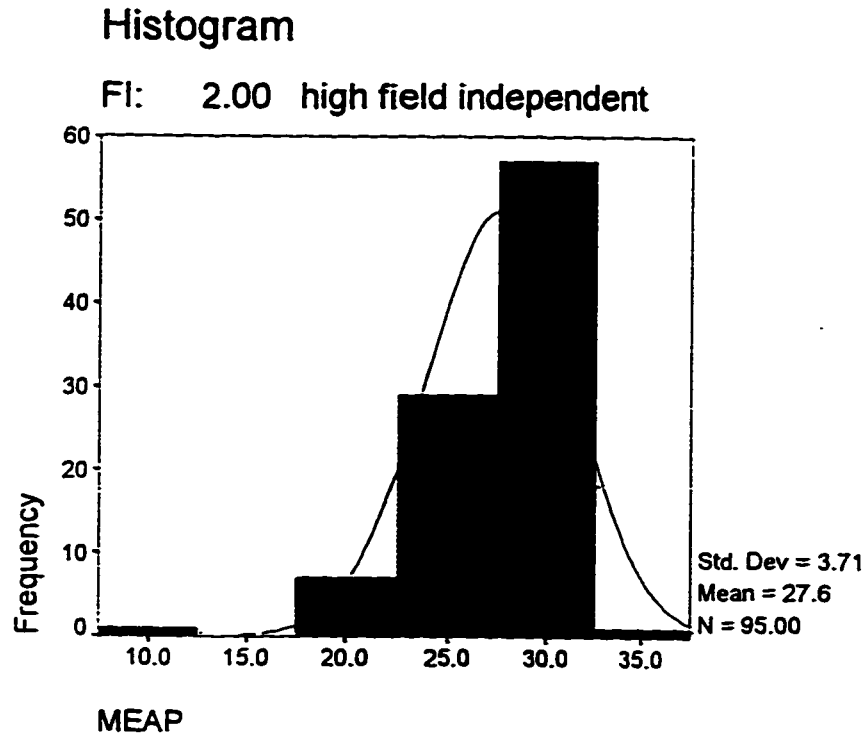


FIGURE 13

HISTOGRAM OF THE FREQUENCY DISTRIBUTION OF THE
RAW SCORES ON THE MICHIGAN EDUCATION ASSESSMENT
PROGRAM EIGHTH GRADE WRITING TEST ATTAINED BY
HIGH FIELD-INDEPENDENT SUBJECTS



APPENDIX G

Coding Sheet

CODING SHEET

(1) (2) (3)	ID	() () ()	Identification Number
(4) (5)	MEAP	() ()	Michigan Education Assessment Program
(6) (7)	GEFT	() ()	Group Embedded Figures Test
(8)	FI	L (1), H (2)	Low Field-Independent High Field-Independent
(9)	SEX	F(1), M(2)	Femenine, Masculine
(10) (11)	Age	() ()	Age

REFERENCES

- Allen, V. 1969. Teaching standard English as a second dialect. In A. Aarons, B. Gordon & W. Stewart (Eds.). Linguistic cultural differences and American education. The Florida FL Reporter, 7,(1), 123-129.
- Alleyne, Mervyn C. 1980. Comparative Afro-American: An Historical - Comparative Study of English - Based Afro-American Dialects of the New World. Ann Arbor:Karoma.
- Andrews, F.M., et al. 1981. A Guide For Selecting Statistical Techniques For Analyzing Social Science Data. Second Edition. Ann Arbor, MI: Institute For Social Research. University of Michigan.
- Ashcroft, Bill, Gareth Griffiths, and Helen Tiffin, eds. 1995. The Post-Colonial Studies Reader. London and New York: Routledge.
- Ball, A. F. 1992. Cultural Preference and the Expository Writing of African American Adolescents. Writing Communication, 2, 4, (Oct.), 501-32.
- Baugh, John. 1983. Black Street Speech: Its History, Structure and Survival. Austin: University of Texas Press.
- Beaugrande, R. D. 1977. Generative Stylistic: Between grammar and rhetoric. College Composition and Communication, 28, (3), 240-246.
- Bergen, T. L., Jr. 1976. Why Can't Johnny Write? English Journal, 65, (8), 36-37.
- Berreiter, Carl, and S. Engleman. 1996. Teaching Disadvantaged Children in Preschool. Englewood Cliffs, NJ: Prentice Hall.
- Bizzell, Patricia. 1987. "Literacy In Culture and Cognition." The Teaching of Writing Ed. Theresa Enos. New York: Randon House.
- Bolinger, D. 1975. Aspects of language. New York. Harcourt Brace Jovanovich
- Borg, R. W. and Gall, M. D. 1983. Educational research. New York. NY. Longman.
- Brumer, J. S. 1978. Learning the mother tongue. Human Nature, 42-49.
- Bruffee, Kenneth. 1986. "Social Consturction, Language, and the Authority of Knowledge: "A Bibliographical Essay." College English. 48.8: 773-790
- Cameron, D. Demythologizing Sociolinguistics: Why Language Does Not Reflect Society" Ideologies of Language. Eds. J.E. Joseph and T.J. Taylor. London: Rountledge, 1990. 79-93.

- designs for research. Boston, MA: Houghton Mifflin.
- Chapman, I. T. 1994. Dissin' the Dialectic on Discourse Surface Differences. Composition Chronicle, 5.
- Chomsky, N. 1957. Syntactic Structures. The Hague: Mouton.
- 1965. Aspects of the theory syntax. Cambridge: MIT Press.
- 1975. Reflections on Language. New York. Patheon Books.
- Cohen, R. A. 1969. Conceptual Styles, Culture Conflict, and nonverbal tests of intelligence. American Anthropologist, 71, 828-856
- Cooper, G. C. 1978. Black stylistic features in student compositions. Resources in Education, Urbana, Illinois.
- 1979. dissertation: The Relationship Between Errors in Standard Usage In Written Composition of College Students and the Student's Cognitive Style. Washington, D.C.
- 1980. Everyone does not think alike. The English Journal, 64, 45-50.
- Craig, H. and Washington, J. 1994. The Complex Syntax of Poor, Urban, African-American Pre schoolers at School Entry. Language, Speech, and Hearing Services in Schools, 25, 181-190
- Daiute, C.. 1985. Writing and Computers. Reading, MA: Addison-Wesley Publishing Company.
- DeCamp, D. 1975. Dimensions of English Usage. In M. Clark.
- Delpit, Lisa D. 1992. Acquisition of Literate Discourse: Bowing Before the Master? Theory Into Practice, Vol. XXXL, Number 4.
- 1995. Other People's Children: Cultural Conflict In The Classroom. New York; The New Press
- Deregowski, J. B. 1974. Pictorial perceptions and culture. In Image, Object, illusion. San Francisco: W. H. Freeman and Company.
- Dillard, J. L. 1972. Black English: Its History and Usage in the United States New York. Random House.
- Dillard, J. L. 1985. Toward A Social History of American English. Berlin: Mouton/deGruyter.

- Elbow, Peter. 1981. Writing with Power. New York. Oxford Press.
- Farrell, Thomas. "Literacy, the Basic and All That Jazz." A Sourcebook for Basic Writing Teachers. Ed. Theresa Enos. New York. Randon House, 1980.
- Fasold, R. and Wolfram, W. 1970. Some linguistic feature of Negro dialect. In R. Fasold and R. Shury (Eds.). Teaching Standard English in the inner city. Washington, D.C. Center for Applied Linguistics.
- Finnegan, R. 1970. Oral literature in Africa. London: Oxford University Press.
- Flower, L. and Hayes, J.. 1981 A cognitive process theory of writing. College Composition and Communiation, 32. 21-32.
- Fordham, Signithia 1994. Searching for answers. Teachers Magazine. 13-14.
- Freedman, S. W., and Hechinger, F. 1992. Writing Matters. Occasional paper. No. 31. National Center for the Study of Writing. University of California, Berkley. Carnegie Mellon University. Pittsburgh, P.A. 1.
- Gee, J. P. 1989 What is Literacy? Journal of Education, 171 (1), 18-25.
- Gill, G. 1992. African American Students at Risk. College Composition and Communication, 43, 225-230.
- Goke Pariola, Abiodun. 1996."African American Vernacular English in Colonial and Post Colonial Perspectives: The Linguistic Paradox." Journal of Commonwealth and Postcolonial Studies. 4 (1)14-19.
- Goodenough, D. R. 1976. The role of individual differences in field-dependence as a factor in learning and memory. Psychological Bulletin, 83 Goodstein, K. M. & Blackman, S. (1978). Cognitive Style: Five Approaches and relevant research. New York. John Wiley & Sons.
- Graves, D.. 1978a. Children's Writing: Research directions and hypotheses based upon examination of the writing processess of seven year-old children. Ann Arbor, MI: University Microfilms.
- Gumper, John. J., H. Kaltman, and M. C. O'Connor. 1984. Cohesion in Spoken and Written Discourse: Ethnic Style and the Transition to Literacy. Coherence in Spoken and Written Discourse. Deborah Tonnen, ed. Norwood, N.J. Ablex.
- Hale-Benson, J. E. 1986. Black Children Their roots, culture and learning styles. Baltimore and London. Johns Hopkins University Press.

- Halliday, M. A. K. 1977. Learning how to Mean: Explorations in the development of language. New York. Elsevier North - Holland, Inc.
- Hairston, M. 1986. The Winds of Change: Thomas Kuhn and the Revolution the Teaching of Writing. College Composition and Communication. 33, 76-88.
- Hartwell, Patrick. 1980. "Dialect Interference in Writing: A Critical Review." Research In The Teaching of English. 14.2(May):101-118.
- Heath, S. B. 1989. Oral and Literate Traditions Among African-Americans Living in Poverty. American Psychologist, 44 (Apr.), 367-373.
- Helm, A. 1974. The family legal advisor. New York. Greystone Press.
- Herskovits, Melville J..1941.Myth of The Negro Past. New York: Harper and Brothers.
- Hill, W. H. & Fox, W. M. 1973. Black and white marine squad leader's perceptions of racially mixed squads. Academy of Management Journal, 16 (4), 680-686.
- Hilliard, A. 1976. Alternative to I.Q. Testing: An approach to the identification of gifted minority children. Sacramento, CA: California State Department of Education.
- Hooks, B. 1989. Talking back. Boston, MA. South End Press.
- Hornburger, J. M. 1969 Bringing their own: Language development in the middle grades. Childhood Education: Valuing diversity in language, 65 (4),45-48.
- Hunter, M. 1976. Right-brained kids in Left-brained schools. Today's Education, 65 (3), 155-157.
- Hymes, D. 1974. Foundations in Sociolinguistics. Philadelphia: University of Pennsylvania Press.
- Irwin, C.C. 1984. Selecting Statistics For Research Purposes.
- Jackson, Blyden. 1989. A History of Afro-American Literature. Vol 1: The Long Beginning, 1746-1895. Baton Rouge:Louisianan State University Press.
- Jaeger, R.M.1983. Statistics: A Spectator Sport.Beverly Hills, CA: SAGE Publications, Inc.
- Jones, E. E. 1978. Black-white personality differences: Another Look. Journal of Personality Assessment, 42, 244-252.

- Krauss, R. M. & Clucksberg, S. 1977. Social and nonsocial speech. Scientific American, 236 (2), 100-105.
- Landis, D. Et. al. 1976. Word meanings in black and white. In Triandis, H.(Ed.), Variations in black and white perception of the social environment. Urbana: University of Illinois Press.
- Labov, W. 1972. Language in the inner city: Studies in the Black English Vernacular, Philadelphia: University of Pennsylvania Press.
- Linn, M. D. 1975. Black rhetorical patterns and the teaching of composition. College Composition and Communication, 26, (2), 149-153.
- Lloyd, B. B. & Easton, B. 1977. The intellectual development of Yoraba children. Journal of Cross Cultural Psychology. 8, (1), 3-16.
- Lloyd-Jones, R. 1976. Is there a crisis writing skills? Today's Education, 65, (4), 69-70.
- Luria, A. R. 1976. Cognitive development: Its cultural and social foundations. (M. Lopez-Morielas and L Solorarcoff, trans; M. Cole. Ed) Cambridge, Harvard University Press. (Originally published 1974).
- Lundsford, Andrea.1987. "Cognitive Development and the Basic Writer." A Sourcebook for Basic Writing Teachers. Ed. Theresa Enos, New York: Randon House.
- Lyons, G. 1976. The higher illiteracy. Harper's, 33-40.
- Lyons, J. 1970. Noam Chomsky. New York. The Viking Press.
- Madhere, S. 1989. Models of intelligence and the black intellect. Journal of Negro Education, 4 (2), 16-19.
- Major, Clarence (ed). A Dictionary of African - American Slang. New York:Penguin B Books, 1984.
- Matthews, B. 1977. Voice of Africa in the diaspora. New Directions, 4 (2), 16-19.
- McCrum, R.C. William, and R. Macneil. The Story of English. New York:Viking, 1987.
- McMillan, J. H. and Schumacher, S. 1984. Research in Education. Boston, MA, Little, Brown and Company.
- k, S. 1984. The nature of cognitive styles: Problems and promise in educational practice. Educational Psychologist, 19 (2), 59-74.

- Merriam Webster's Collegiate Dictionary, Tenth Edition. 1993.
- Michigan State Board of Education. 1989. Michigan Education Assessment Program. Model Core Curriculum Outcomes. Lansing, MI.
- Michigan State Board of Education. 1995. MEAP Writing Assessment in Grades 5 and 8. Models of Assessments. Lansing, MI.
- Michigan State Board of Education. 1996. Michigan Educational Assessment Program (MEAP). Handbook. Lansing, MI.
- Moffett, J.. 1982 Writing, inner speech, and meditation. College English, 44. 231- 246.
- Morrow, Daniel Hibbs. 1985. "Dialect Interference in Writing: Another Critical View." Research in the Teaching of English. 10:154-179
- Mufwene, Salikoko S. Ed. 1993. Africanism in Afro-American Language Varieties. Athens: University of Georgia Press.
- Mufwene, Salikoko S. Ed. 1994. "African American English "The Cambridge History of the English. Languag. Vol.6. The History of American English, Ed. John Algeo. Cambridge University Press.
- Nebelkopf, E. B. and Dreyer, A. S. 1979. Continuous-dis concept attainment as a function of individual differences in cognitive style. Perceptual and Motor Skills, 36, 655-662.
- Norusis, M.J. 1988. The SPSS guide to data analysis for SPSSX. Chicago, IL:SPSS INC.
- Nystrand, M. 1977. Language as discovery and exploration: Heuristic and explicative uses of language. In Nystrand, M. (Ed). Language as a way of knowing. Ontario, The Ontario Institute for Studies in Education.
- Odell, L.. 1977. Measuring change in intellectual processes as one dimension of growth in writing. In C. Cooper & L. Odell (Eds.). Evaluating Writing. Urbana, Illinois NCTE.
- Oliver, Eileen. Let the Writing Speak for Itself: Assessing the Composition Skills of Inner-City African American Students. ERIC. ED 386 729.
- Perney, V. H.. 1976. Effects of race and sex on field dependence-independence in children. Perceptual and Motor Skills, 42, 975-990.
- Ramirez III, M. & Castaneda, A. 1974. Cultural democracy bicognitive evelopment and education. New York: Academic Press.

- Ramirez, M. & Price-Williams, D. R. 1974. Cognitive Styles of children of three ethnic groups in the United States. Journal of Cross-cultural Psychology, 5 (2), 212-219.
- Richardson, Elaine. 1996. "Do You Know What I Mean?": The Struggle Continue...Journal of Commonwealth and Postcolonial Studies.4 (1)99.
- Rickford, John R. 1988. "Language Contact, Variation and Diffusion:Microlevel Community Perspective." G[eorgetown] - U[niversity]-R[ound]-T[able] on Languages and Linguistics. Washington, D.C. 25-44.
- Rubie, D. N. & Nakamura, C.. 1975. Task orientations versus social orientations in young children and their attention to relevant social cues. Child Development, 43, 471-480.
- Runyon, R.P. and Haber, A..1980. Fundamentals of Behavioral Statistics Reading, MA:Addison-Wesley.
- Shade, B. J. 1982. Afro-American Cognitive Style. A variable in school success? Review of Educational Research, 52, 219-294.
- Shade, B. J. & Edwards, P. A. 1987. Ecological Correlates of the education style of Afro-American children. Journal of Negro Education, 56, 86-99.
- Sharp, V.P..1979. Statistics for the Social Sciences. Boston, MA:Little, Brown and Company.
- Smitherman, G. 1969. A Comparison of the Oral and Written Styles of a group of Inner-City black students. (Doctor of dissertation, University of Michigan). Dissertation Abstracts International, 29, 3102A. (University Microfilms No. 70-14, 645).
- 1973. White English in black face or, who do I be? The Black Scholar, 4, (3) 32-39.
- 1977. Talkins' and Testifyin: The language of Black America. Detroit, MI. Wayne State University Press.
- Smitherman, G. 1995. Students' Right to their own language: A Retrospective. English Journal, 84, 24-27.
- 1994. Black Talk: Words and Phrases from the Hood to the Amen Corner Boston and New York: Houghton Mifflin Company.
- Smith, A. N. 1976. No one has a right to his own language. College Composition and Communication, 27 (2), 155-159.
- Stalker, J. C. 1974. Written language as dialect of English. College Composition and

Communication, 25 (4), 259-263.

- Sternglass, M. 1974. Dialect features in the composition of black and white college students: the same or different? College Composition and Communication, 25 (4), 259-
- Steward, W. A. 1970. Toward a history of American Negro dialect. In F. Williams (Ed). Language and poverty. Chicago Markham Publishing Company.
- Stone, M. K. 1976 The role of cognitive style in teaching and learning. Journal of Teacher Education, 27, 332-334. Students' right to their own language. 1974 Special issue of College Composition and Communication, 25 (3)
- Szalay, L. B., & Bryson, J. A. 1973. Measurement of psychocultural distance: A comparison of American Blacks and Whites. Journal of Personality and Social Psychology, 26 (2), 166-177.
- Taylor, B. M. and Samuels, S. J. 1983. Childrens use of text structure in the recall of expository materials. American Educational Research Journal, 20, 517-528.
- Turner, L. 1949. Africaisms in the Gullah dialect. Chicago. University of Chicago Press. Reprinted in 1974 with an introduction by David DeCamp, Ann Arbor:Univeristy of Michigan Press.
- Ullman, S. 1964. Language and Style New York. Barnes & Nobels, INC.
- Vygotsky, L. S. 1978. Mind in society: The development of higher psychological processes, (M. Cole, V. John-Steiner, S. Scriber, & E. Souberman (eds.)). Cambridge. Harvard University Press (Originally unpublished manuscript, 1930 and a monograph, The history of the development of higher psychological functions, Moscow, 1960).
- Wellek, R. & Warren 1977. Theory of literature. New York: Hartcourt Brace Jovanovich.
- White, J. 1970. Guidelines for Black Psychologists. The Black Scholar, 1 52-57.
- Williams, J. M. 1977. Linguistic responsibility. College English, 39 (1), 8-17.
- Witkin, H. A.. 1950. Perception of the upright when direction of the force acting on the body is changed. Journal of Experimental Psychology. 40, 93-106.
- Witkin, H.A.. 1971. A Manual for the embedded figures tests. Palo Alto: Consulting Psychologists Press.
- Witkin, H. A., Moore, C. A., Goodenough, D. R. & Cox, P. W. 1977. Field-dependent and field-independent Cognitive Styles and their education implications. Review of

Educational Research, 47 (1), 1-64.

**Wittrock, M. C. 1979. The cognitive movement in instruction. Educational Researcher, 8,
5-11.**

**Wolfram, W. & Fasold, R. 1974. The Study of Social Dialects in American English.
Englewood Cliffs; Prentice New Jersey: Prentice-Hall. Wolfram, W. & Whiteman,
M. (1971). The role of dialect interference in composition. Florida FL Reporter, 2
(1 & 2), 34-38, 99.**

**Zeigler, Mary Brown. 1996. Postcolonial Contexts of African American Vernacular
English. Journal of Commonwealth and Postcolonial Studies. 4(1) 1-6.**

**Zelmeiman, S. & Daniels, H. 1988. A Community of Writers: Teaching Writing
in the Junior and Senior High School. Portsmouth, NH: Heinemann.**

ABSTRACT

RELATIONSHIPS BETWEEN COGNITIVE STYLES AND WRITTEN COMPOSITION OF AFRICAN AMERICAN NINTH GRADE STUDENTS IN A METROPOLITAN SCHOOL DISTRICT IN WESTERN MICHIGAN

by

CATHERINE W. LARGE

December 1997

Advisor: Dr. Manuel Mazon

Major: Curriculum and Instruction

Degree: Doctor of Education

The purpose of the present study was to investigate the relationships that exist between cognitive styles, and written composition. The procedure included testing 200 ninth grade students in six high schools in a metropolitan school district in western Michigan, with the Group Embedded Figures Test (GEFT). The median for the GEFT scores was the criterion used to form two categories of cognitive styles, low field-independent and high field-independent. The writing items of the Michigan Education Assessment Program (MEAP) Eighth Grade Writing Test, provided the measures for writing comprehension. Analyses of one-way ANOVA were performed to determine whether there were statistically significant differences between low field-independent and high field-independent subjects in written composition. The analysis of the data revealed a statistically significant difference for the measure of written comprehension, $F(1,198) = 214.62, P < .05$. The written comprehension of raw scores were higher for high field-independent subjects than for low field-independent subjects. The result of the

styles were manifested in written composition. The data suggested that written comprehension is likely to differ remarkably as a function of cognitive styles. The disposition to process information in a more articulated or less articulated manner is reflected in writing.

AUTOBIOGRAPHICAL STATEMENT

Name: Catherine W. Large
Date of Birth: December 16, 1949
Place of Birth: Simpson Co., Mississippi

Education:

B.A. in History, Jackson State University, May, 1972.
M.A. in Social Science, Jackson State University, May, 1973.
Certification in Education Administration, Grand Valley State University, August, 1989.
Ed.D in Curriculum and Instruction, Wayne State University, December 1997

Professional Experience:

World History/Mississippi History Teacher West District Junior High School, Summer Mississippi from 1973 to 1977.
English and Social Studies Teacher - OIC in Grand Rapids Michigan from 1977 to 1984
Geography and English Teacher - Northeast Middle School in Grand Rapids Michigan from 1984 to 1986.
American History/Government Teacher - Creston/Ottawa/City High Schools from 1986-1988.
Supervisor of Social Studies from 1988-1992.
Director of Multicultural Education - Grand Rapids Public School District from 1992 to present.

Professional Affiliations:

Association for Supervision and Curriculum Development
Michigan Council of Social Studies
Michigan Geographic Alliance
National Alliance of Black School Educators
National Association of Multicultural Education
Multicultural Review
African American Historians

Writings:

Poet - 117 poems
Playwright - 52 Plays