A COMPARISON OF THREE LANGUAGE SCREENING TESTS

A Thesis
by
Diane Sanderson Meiburg

Submitted to the Graduate School
Appalachian State University
in partial fulfillment of the requirements for the
degree of
MASTER OF ARTS

August 1987

Major Department: Speech Pathology
A COMPARISON OF THREE LANGUAGE SCREENING TESTS

A Thesis
by
Diane Sanderson Meiburg
August 1987

APPROVED BY:

Dr. M. Louis Joselson
Chairperson, Thesis Committee

Dr. Millard Meador
Member, Thesis Committee

Dr. Ben Strickland
Member, Thesis Committee

Dr. Mike Marlowe
Chairperson, Department of Language,
Reading and Exceptionalities

Dr. Joyce Lawrence
Dean of Graduate School
ABSTRACT

A COMPARISON OF THREE LANGUAGE SCREENING TESTS

Diane Sanderson Meiburg, B.S. Appalachian State University

Thesis Chairperson: M. Louis Joselson

The purpose of this study was to compare the results of three language screening tests (Tennessee Test of Appalachian Language, Fluharty Preschool Speech and Language Screening Test, and Florida Language Screening System) administered to nonstandard English speakers, using the following criteria: (1) length of administration time and (2) number of children who passed or failed the tests. From these data, an attempt was made to determine if the Tennessee Test of Appalachian Language is an appropriate screening tool when given to children who speak Appalachian dialect in western North Carolina.

The literature related to this subject was reviewed and reported under three main areas: (1) Relationship Between Language and Culture, (2) Dialect
Difference in Education, and (3) Dialects and Testing Procedures.

Twenty-two kindergarten and first grade students, ranging in age from 6-0 to 6-11 years, selected from three public elementary schools in Avery County, North Carolina, served as subjects for this study. Each subject was given the battery of language screening tests and the resulting data were analyzed using a paired t-test to determine if there was a statistically significant difference between the mean time of administration between the Tennessee Test of Appalachian Language, the Fluharty Preschool Speech and Language Screening Test, and the Florida Language Screening System at the .01 level of significance. A group t-test was used to determine the correlation between the mean scores of children tested in North Carolina and the children tested in Tennessee on the Tennessee Test of Appalachian Language at the .01 level of significance.

The t-value of the mean scores collected from the two populations on the Tennessee Test of Appalachian Language was 5.63. Therefore, it was assumed that the Tennessee Test of Appalachian Language was not a culture-fair screening tool when used with the
population selected in this study. It was also determined that there was a significant difference between the administration times of the Fluharty Preschool Speech and Language Screening Test and the Florida Language Screening System; and the Florida Language Screening System and the Tennessee Test of Appalachian Language when compared. There appeared to be no significant difference between the Fluharty Preschool Speech and Language Screening Test and the Tennessee Test of Appalachian Language insofar as time of administration is concerned.
ACKNOWLEDGEMENTS

The author would like to give her thanks to Dr. M. Louis Joselson for his assistance throughout the writing of this thesis. Grateful acknowledgement is also extended to Dr. Millard Meador and Dr. Ben Strickland for their feedback and participation in this project. Sincere appreciation is also extended to Dr. Claire Maisel for her permission to use the Tennessee Test of Appalachian Language and her thoughtful input throughout the writing of this thesis. I would like to give special thanks to Linda Carr-Kraft for her assistance in testing the subjects; and to Deanna Bowman for her help in the statistical analysis. This study would not have been completed without the support of my husband, David Meiburg. I would like to thank him, my family, and special friends who provided endless encouragement and assistance necessary to complete this project.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>LIST OF TABLES</th>
<th>ix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>2</td>
</tr>
<tr>
<td>Purpose of this Study</td>
<td>3</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>3</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>4</td>
</tr>
<tr>
<td>Limitations and Assumptions</td>
<td>5</td>
</tr>
<tr>
<td>2. REVIEW OF THE RELATED LITERATURE</td>
<td>7</td>
</tr>
<tr>
<td>Relationship Between Language and Culture</td>
<td>7</td>
</tr>
<tr>
<td>Dialect Differences in Education</td>
<td>18</td>
</tr>
<tr>
<td>Dialects and Testing Procedures</td>
<td>21</td>
</tr>
<tr>
<td>3. METHODS AND PROCEDURES</td>
<td>27</td>
</tr>
<tr>
<td>Subjects</td>
<td>27</td>
</tr>
<tr>
<td>Method of Subject Selection</td>
<td>27</td>
</tr>
<tr>
<td>Testing</td>
<td>29</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>31</td>
</tr>
<tr>
<td>4. RESULTS</td>
<td>32</td>
</tr>
<tr>
<td>Introduction</td>
<td>32</td>
</tr>
<tr>
<td>Analysis of Data</td>
<td>33</td>
</tr>
</tbody>
</table>
5. SUMMARY, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS

Introduction ........................................... 37
Summary ............................................. 37
Conclusions .......................................... 38
Implications ......................................... 39
Recommendations ...................................... 39

BIBLIOGRAPHY ............................................ 42

APPENDICES

A. Breakdown of Subject Data on Children Tested in North Carolina ............... 48

B. Age Range, Mean Age, Median, Mode for Children Tested in North Carolina .... 50

C. Age Range, Mean Age, Median, Mode for Children Tested in Tennessee ........... 52

D. Raw Score Range, Mean Score, Median, Mode for Children Tested in North Carolina on the Tennessee Test of Appalachian Language ................. 54

E. Raw Score Range, Mean Score, Median, Mode for Children Tested in Tennessee on the Tennessee Test of Appalachian Language ..................... 56

VITA .......................................................... 57
<table>
<thead>
<tr>
<th>Table</th>
<th>page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age and Sex of the Subjects in the Study</td>
<td>29</td>
</tr>
<tr>
<td>2. Mean Administration Times of the Tools</td>
<td>35</td>
</tr>
<tr>
<td>Used in this Study</td>
<td></td>
</tr>
<tr>
<td>3. The t values of the Mean Administration</td>
<td>35</td>
</tr>
<tr>
<td>Times</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 1
INTRODUCTION

Effective and efficient selection of testing instruments to evaluate and assess language has been a growing concern of the speech-language pathologist. Many standardized assessment instruments are available to the speech-language pathologist. Clinicians select and use certain tests or batteries of tests to evaluate a child's language function despite the fact that those tests may not be totally appropriate for evaluating a child whose dialect is nonstandard.

Language tests are used for a wide variety of purposes and the test norms may conflict with the language system of a nonmainstream speaker (Wolfram, 1979). Anastasiow's (1976) work with children from families below the poverty level suggests the need for a classroom assessment instrument for oral language of children who speak a nonstandard vernacular. Different linguistic items that speakers may use as part of their linguistic system is one of the aspects of test interference that might be involved when testing nonmainstream speakers (Wolfram, 1976).
Statement of the Problem

Speech-language pathologists and students of linguistics argue that a language test of standard English may not be appropriate for a dialect speaker. Should a speaker with a nonstandard dialect, who falls below acceptable norms on a standardized language test, be diagnosed as communicatively impaired? Historically it was believed that a child had a communication impairment if the child did not use standard English (Evard & Sabers, 1979). More recent studies suggest that a child should not be considered language disordered, but rather, language "different", if that child uses nonstandard English. There has been a growing concern among speech-language pathologists about the availability of valid instruments to test these children. When testing nonstandard English speakers, the validity of a test is affected by: 1) the population upon which the norms were developed and 2) the difference between test content and the cultural background of the child (Evard & Sabers, 1979). Because of the profusion of nonstandard dialect in the Appalachian region, there is a need for an appropriate speech/language screening tool for these children. This writer will attempt to study some specific aspects of Appalachian dialect
usage and discuss implications for the speech-language pathologist in the public schools.

Purpose of This Study

The purpose of this study was to compare the results of three language screening tests (Tennessee Test of Appalachian Language, Fluharty Preschool Speech and Language Screening Test, and Florida Language Screening System) which were administered to nonstandard English speakers, using the following criteria: 1) length of administration time, and 2) number of children who passed or failed the tests. From these data, an attempt was made to determine if the Tennessee Test of Appalachian Language, developed for Appalachian English, is a culture-fair screening tool when given to children who speak Appalachian dialect in western North Carolina.

Hypotheses

In order to give direction to the data analysis, the following hypotheses, stated in the null form, were tested at the .01 level of significance.

H0 1: The Tennessee Test of Appalachian Language (TN TAL, an unpublished language-screening test) is not a culture-fair screening tool when used with
children who are identified as using Appalachian dialect in western North Carolina.

Ho 2: There is no statistically significant difference in the time of administration and the number of children passing the Tennessee Test of Appalachian Language, the Fluharty Preschool Speech and Language Screening Test, and the Florida Language Screening System.

Definition of Terms

Dialect: the "specific form of a language spoken in a given geographical area, differing sufficiently from the official standard of the larger language community (pronunciation, vocabulary, and idiomatic use of words) to be regarded as a distinct entity, yet not sufficiently different from other dialects of the language to be regarded as a separate language" (Nicolosi, Harryman, & Krescheck, 1980, p. 63).

Appalachian English: "a nonstandard form of English, varying in both phonological features and grammatical structures" (Skruggs, 1979, p. 1).

Appalachian Region: "includes parts of mountainous Kentucky, Virginia, North Carolina, Tennessee, and all of West Virginia" (Skruggs, 1979, p. 1).
Standardized Test: composed of selected materials; must have adequately determined norms, a particular direction for use, and data on validity and reliability (Nicolosi, Harryman, & Krescheck, 1980).

Screening Test: used for the sole purpose of determining whether there is a need for a complete speech-language evaluation (Striffler & Willig, 1981).

Vernacular: the common or native language of a place or group (Morehead & Morehead, 1972).

Limitations

1. Because the study was performed on a limited number of children, the results may not be generalized beyond the experimental population.

2. Because the number of children tested in North Carolina did not equal the number of children tested in Tennessee, the correlation of test results may not be generalized beyond the experimental population.

Assumptions

The following assumptions were made in this study:

1. That the graduate clinicians, having practiced the administration and scoring of the three
language screening tests, were qualified to administer and score all tests used in this study.

2. That the children used in this study did meet the criteria set by the examiner.

3. That the criteria set by the examiner identified children who used Appalachian dialect.
CHAPTER 2
REVIEW OF THE RELATED LITERATURE

Relationship Between Language and Culture

Language has been referred to as central to communication, as the object of knowledge, and as the means by which other knowledge is gained (JASHA, 1976). It is reasonable to state that children learn the language of their parents and community. Children also learn language at an age when a simpler task, such as color identification, is absent (Cazden, 1972).

Wolfram (1979) states that if one speaks the English language, that person ultimately speaks some dialect of the English language. Language variation is a natural reflection of cultural and community differences, and these differences are well within the normal range of behavior in our society. All speakers of the English language will notice variations in the language and will comment about it as they interact with people from different social and ethnic groups.
and regions of the United States (Wolfram & Christian, 1976). Wolfram (1979) refers to speaking a particular dialect to living in a certain neighborhood within a city, where that dialect speaker is both part of the neighborhood and the city at the same time.

One purpose of this research project was to determine if a particular language screening test, developed for Appalachian English speakers, would be appropriate for dialect speakers in another location of the Appalachian region.

Wolfram (1979) addresses language variation and assessment:

The variation is an intrinsic part of language and so understanding language differences is an important part of understanding normal language...Accurate assessments and therapeutic strategies for particular communities are dependent on this knowledge about language variation (p. 2).

Variations in languages are often referred to as dialects. Most languages include a variety of dialects which can be distinguished from one another through their syntactical, lexical, and phonological systems (Adler, 1979). The term dialect is also used to refer to a particular geographical or social variety of the "standard" English (Wolfram & Christian, 1979). Wolfram and Christian give a more "technical" meaning of dialect,
...any given variety of a language shared by a group of speakers. These varieties usually correspond to differences of other types between the groups, such as geographical location, social class, or age. People who share important social and regional characteristics will typically speak quite similarly, and those who do not will often differ in their language as well...

Everyone is part of a group which can be distinguished from other groups, and one of these groupings depends on how you talk. In other words, if you speak the English language, you necessarily speak some dialect of the English language (p. 1).

In the United States, social and physical barriers establish variations. Mountains and rivers have historically separated people from each other, thus creating a natural basis for language differences to appear and remain (Wolfram & Christian, 1979). Even though somewhat distinct natural barriers may exist, determining the number of different dialects, and where one dialect begins and ends, is difficult to determine (Wolfram & Christian, 1979). Wolfram and Christian (1979) do, however, emphasize that, "...no variety of language is inherently better than another; none is less logical or less complex than others" (p. 8).
Language dialects can be found or identified by determining one's cultural and social background. "A group's culture generates the language, but on the other hand, the language has a controlling effect upon the culture" (Cleland, 1973, p. v). Wolfram and Christian (1979) agree with the position that social factors are responsible for the differences in the way people speak, and feel that culturally and linguistically different groups could be at a disadvantage because of their less favored status in society.

Description of Appalachian English

Adler (1979) states that Appalachian dialects are a set of subcultural dialects that have enough similarities to be included in one category. Wolfram and Christian (1976) use the term "Appalachian English" to refer to the language associated with "the working class rural population found in one particular region of the Appalachian range" (p. 29). Another position is to classify the Appalachian folk speech as archaic (Dial, 1978).

Wolfram and Christian (1976) indicate that the most significant factor in accounting for the diversity in American English is geographical region. "The Appalachian Mountain region covers territory from
Maine to Alabama, but the area most typically referred to as 'Appalachia' has generally been considered to encompass parts of Kentucky, Virginia, North Carolina, Tennessee, and all of West Virginia" (p. 5).

Appalachian English derives from the historical period of the first Queen Elizabeth and the speech heard today is Scottish-flavored Elizabethan English (Dial, 1978). Dial explains,

The reason our people still speak as they do is that when these early Scots and English and Germans (and some Irish and Welsh, too) came into the Appalachian area and settled, they virtually isolated themselves from the mainstream of American life for generations to come because of the hills and mountains, and so they kept the old speech forms that have long since fallen out of fashion elsewhere (p. 51).

The pronunciation of many words has changed over the years, Dial explains, but the most outstanding feature of the Appalachian English is its "masculine flavor -- robust and virile" (p. 55).

A list of some of the more noticeable phonological and grammatical features of Appalachian English from the research of Wolfram and Christian (1976) and Adler (1979) follows:

**Consonant Clusters**

Deletion of a stop t, d, p, or k, when it follows another consonant at the end of a word, giving 'tes'
for 'test' or 'des' for 'desk'. Addition of the -es plural may occur when a word ends in st, sp, or sk, such as 'desk/es' for 'desks' or 'ghost/es' for 'ghosts'.

Copula Absence

The deletion of the present tense copula, are, in Appalachian English is evident only when following a pronoun giving, "We ___ interested in baseball." or "They ___ afraid."

Unstressed Syllable Deletion

Appalachian English speakers tend to delete the initial syllable of a word when it is unstressed. Examples: "Kids should be '11owed to hear that." "He's a 'electrician."

Deletion of Initial Voiced TH

The deletion of the initial voiced th has become a characteristic stereotype of the Appalachian area. Example: "But 'ey wasn't right 'at day."

'Ire' Sequences

In Appalachian English the sequence 'ire' as in 'fire' and 'tire' may be pronounced as 'fahr' and 'tahr' and may often be confused with 'far' and 'tar' by a non Appalachian English speaker.
Final Unstressed 'ow'

The final unstressed 'ow' in standard English may be pronounced as 'er' in Appalachian English resulting in 'holler' for 'hollow', 'tabaccer' for 'tabacco,' or 'yeller' for 'yellow'. It may also occur when the plural -s is added to words changing 'potatoes' to 'potaters' or 'windows' to 'winders'.

Other Consonant Features

Appalachian English is one of the various dialects in which the incidence of the older pronunciation of 'ask' may be observed (i.e. 'axe').

The pronunciation of 'chimney' in Appalachian English can be observed as 'chimley' or 'chimbley'.

Word-final voiced stops d, g, and b may be pronounced as t, k, and p in Appalachian English such as, 'hundret' for 'hundred' or 'salat' for 'salad'.

A - verb-ing

An a- prefix can occur with the -ing participle forms. The most common a - verb-ing presents itself with progressives such as, "Well, she's a-gettin' the black lung now, ain't she?" or "...I was a-comin' home."

Perfective 'Done'

The use of 'done' as a perfective marker may occur giving, "I done forgot when I opened it".
Subject-Verb Concord

An agreement between the subject and the verb in the sentence of an Appalachian English speaker may not occur. Examples: "Me and my sister gets in a fight sometimes" or "the cars was all torn up."

Irregular Verbs

In many varieties of English, irregular verbs tend to have substitute past forms which will differ from what is considered the standard. Examples: "We throwed them a party." "When I brung it back, my rod was broke."

Double Modals

Two modals may occur in the same verb phrase such as, 'might could' or 'useta could'.

Intensifying Adjectives

The incidence of the word 'right' as an intensifier is often used before adjectives in Appalachian English. Examples: "It was right large." "They've been gone for a right smart while."

A second intensifier, 'plumb,' can also be found in Appalachian English and refers to completeness. Examples: "I scared you plumb to death." "That was plumb foolish."
Double Negation

A grammatical difference that can be found in other varieties of English typically ranges over the entire sentence. Examples: "Nobody else won't move in." "Wasn't nothing to do."

Plural Suffix

The absence of plurals in Appalachian English is limited almost entirely to nouns of weight and measure when they are preceded by a quantifier, giving "two hundred pound of nails" or "...three foot of them."

Possessive Pronouns

An n may be added to a possessive pronoun in Appalachian English giving forms such as 'yourn', 'h isn', 'hern', 'ourn', and 'the rn'.

Expletive 'there'

In Appalachian English 'they' may be used as a homology for the standard English expletive 'there'. Examples: "Now they's a difference" or "they's copperheads around here."

Lexical Features

There are various lexical features found in Appalachian English that may interest the reader:

'a-crow-to-pick' 'matter to settle'
'all-my-born-days' 'lifetime'
'amount-to' 'prosper, succeed'
'apiece' 'each, per person'
'atter-erds' 'later'
Although the speech of an Appalachian English speaker is apparently different from standard English, Wolfram and Christian (1976) indicate that Appalachian English should not be viewed "as an incomplete mastery of the rules of standard English." They state that "there are often intricate and detailed rules which account for the forms of Appalachian English — just as there are for any dialect or language" (p. 132). Appalachian English speakers acquire their system at approximately the same rate as standard English speakers acquire theirs (Wolfram & Christian, 1976). It is interesting to note that Appalachian English speakers will not always use a particular form or rule included in their system, but will fluctuate between Appalachian English and an alternate form of English (Wolfram & Christian, 1976).

**Dialect Difference or Disorder**

There is much confusion and concern among educators about whether a dialect is considered a
"difference" or a "disorder." Wolfram (1979) explains that "language difference" is used to refer to a variation in language that may exist from community to community. Wolfram also explains that the language norm of the community is a key factor in determining whether there is a language "difference" or "disorder." A language disorder is determined or identified when certain forms do not match the norms of the speaker's community. In language difference, a person's speech and language patterns represent the norms of the community environment in which the language was learned (Wolfram, 1979). These individuals speak a dialect and speak well in terms of their dialect; therefore, they should be referred to as having a language "difference" and not a language "disorder" (Wolfram, 1979).

Work (1982) reiterates Wolfram's statements indicating that a dialect speaker should not be considered handicapped based on the dialect alone; rather, the individual must demonstrate deviation within the dialect form to be classified as disordered.

Socially and regionally differentiated groups have always existed, and within these groups dialect differences appear to be a fact of life (Wolfram &
Christian, 1979). It seems that once the determination has been made between "disorder" and "difference" there would no longer be a need for further concern. Wolfram and Christian (1979) seem to believe differently when they explain that,

along with the recognition of dialects may go strong feelings about the character of people. Educators sometimes make assessments and classifications based on how students speak; employers make placement and hiring decisions based on listening to how people talk. The ramifications of dialect differences, then, are of no small consequence (preface).

Children are often corrected in school when they speak in a nonmainstream dialect, and these individuals gradually are taught that the language they have always known and used is viewed as a distortion of proper English (Wolfram & Fasold, 1974).

Dialect Differences in Education
Children enter the public schools every year bringing with them social, economic, and cultural differences. Adler (1979) indicates that children enter school with significant handicaps in educational readiness related to their culturally different backgrounds. A dialect difference could easily handicap a student when trying to understand both
spoken and written standard English. Too frequently speech and language patterns that differ from the standard are rejected not only by peers but also by teachers (Adler, 1979). As a result of linguistic and cultural differences many students have been labeled "functional retardates" (Adler, 1979, p. 13).

Wolfram and Fasold (1974) assert that an obvious conflict would arise when the culturally different child enters school. "In the area of language, a child from a sector of society in which a nonstandard dialect is the real medium of community life will be told by his teacher that certain things in the language patterns he is used to are wrong" (p. 177). It is possible that few teachers have been exposed to the theory concerning dialect "differences" and that these nonstandard dialects are adequate, rule-based systems. Instead many teachers believe that "differences from 'correct' English represent deficiencies to be overcome" (Wolfram & Fasold, 1974, p. 178).

Educators confront language variations as they experience the effect that variations may have on the acquisition of educational skills that are language based. Wolfram and Christian (1979) indicate that
Dialects and education have presented controversial issues since the late 1960s.

One central issue has been whether or not to require the use of a standard dialect in the course of education. Such a requirement is considered to be discriminatory by some, since it places an extra burden on certain groups and may mean they will not receive the same educational opportunity as other groups... Others argue that it is a responsibility of the education system to teach a standard dialect so that all groups will have a better chance for equal opportunity in later life (p. 11).

Dialect Differences and the Implications of State and Federal Guidelines for Services

Since children in the public schools are often mistakenly identified as language disordered, it would be wise to review the guidelines for testing and serving speech and language impaired children. The Education For All Children Act, Public Law 94-142, legislates that the communication status of all school children should be assessed. The speech and language services, as defined by PL 94-142, include the identification, diagnosis, and appraisal of specific speech and language disorders. Along with the identification and diagnosis of a child with a speech and language disorder, PL 94-142 requires that the assessment materials and procedures be chosen and administered so as not to be culturally or racially discriminatory (Dublinski & Healey, 1978).
The North Carolina State Department of Public Instruction, Division for Exceptional Children (1981), states that children are language impaired when they evidence:

a disability in verbal learning (language disorders) resulting in a markedly impaired ability to acquire, use or comprehend spoken or written language where no significant degree of sensory or motor incapacity, mental retardation, emotional handicaps or environmental disadvantage is present as the primary disabling condition...(p. 3).

The American Speech-Language Hearing Association (ASHA) indicates that a dialectical variation should not be considered as a disorder or pathological form of speech or language. Battle et al. (1983) stated that

an essential step toward making accurate assessments of communicative disorders is to distinguish between those aspects of linguistic variation that represent the diversity of the English language from those that represent speech, language, and hearing disorders (p. 24).

**Dialects and Testing Procedures**

Standardized testing has been common in American education for many years. A readiness test for kindergarten, achievement tests during elementary school, a test to determine preparedness for college and potential for graduate school, are all normed for
standard English speakers. Speech and language tests have standard English probes or questions and standard English responses. Wolfram (1979) expresses concern in that even though a test clearly indicates that it is to be used with standard English speaking populations, various dialect groups are given this test and it is scored on the same standard English basis. This could be due to a lack of testing material available for nonmainstream speakers. A strategy adopted by some writers of standardized tests is the acceptance of certain dialect differences as correct responses in the scoring procedure. Too often, the dialect information provided in the test manual is inadequate, and therefore, the problem persists.

Language tests can be used for a variety of purposes, such as the assessment of language development, auditory discrimination, and the diagnosis of learning disabilities. In these cases, the test norms may conflict with the language system of a nonmainstream speaker (Wolfram & Christian, 1976). Not only do nonmainstream speakers often score poorly on standardized tests, but the testing
situation, the social style of the administration, and the expected behavior of the test taker put non-mainstream speakers at a disadvantage.

Test takers may respond quite differently to the test procedures in ways having nothing to do with the skills being tested (Wolfram & Fasold, 1974). It is not uncommon for a test taker to feel uncomfortable about being asked a lot of questions, especially when the questioner is an outsider to the community. The nonmainstream speaker may perceive the test as an instrument designed to measure responses according to someone else's standards. "This speaker must refer to two standards of correctness, one for communicating in his community and the other for taking the test" (p. 190).

Standardized tests have revealed disproportionately lower scores for nonmainstream groups (Wolfram & Christian, 1980). The disproportionate incidence of children from dialect groups being diagnosed as having speech and language disorders should immediately raise suspicion (Wolfram & Fasold, 1974).

Wolfram and Christian (1980) suggest several principles for evaluating a test for dialect interference and bias against nonmainstream dialects.
1. Consider the assumptions that underlie the test taking task. 2. Predict what specific items in the test that will create a conflict between the rules of the nonmainstream dialect. 3. Compare what the test claims to be testing with what it actually tests. 4. Determine how the results of the test must be interpreted for nonmainstream speakers (p. 196-197).

The equitable way to norm a particular speech-language test for nonmainstream dialects, such as Appalachian English, would be to compare the testee to other Appalachian English speakers (Wolfram & Christian, 1980). Wolfram (1979) emphasizes that it would not be appropriate to evaluate children's language abilities on any other norm than the one serving as their model for acquisition.

Researchers investigating dialect differences and testing those differences favor giving credit for appropriate forms when using current speech and language tests (Wolfram, 1979). Although this procedure is recommended, most tests do not have established norms for these different populations of speakers. Therefore, the speech-language pathologist must be cautious in interpreting the test scores as truly objective.

Cole (1983) developed a variety of alternatives to the inappropriate use of tests standardized on
standard English speakers. These alternatives include:

a) developing tests based on local dialect norms, b) testing only those features that are common to both dialects, c) conducting item analysis of tests to identify items that present potential bias against dialect speakers and indicating alternatively acceptable responses, d) utilizing alternative scoring procedures for dialect speakers, e) reporting behavioral responses to test content without reporting scores, and f) relying only on informal judgments of the communication behaviors of the individual (p. 26).

Vaughn-Cooke and Boyd (1983) have also suggested the following alternatives to more traditional, less appropriate tests:

1) Standardize existing tests on non-mainstream English speakers. 2) Include a small percentage of minorities in the standardization sample when developing a test. 3) Modify or revise existing tests in ways that will make them appropriate for non-mainstream speakers. 4) Utilize a language sample when assessing the language of non-mainstream speakers. 5) Utilize criterion-referenced measures when assessing the language of non-mainstream speakers. 6) Refrain from using all standardized tests that have not been corrected for test bias when assessing the language of non-mainstream speakers. 7) Develop a new test which can provide a more appropriate assessment of the language of non-mainstream English speakers (p. 29).

It remains the responsibility of the speech-language pathologist to serve the truly communicatively handicapped (Battle et al., 1983).
In order to do this, the speech-language pathologist must be competent in distinguishing between dialect differences and valid communication disorders. A knowledge of the particular dialect as a rule based language system, knowledge of the phonological and grammatical features of the dialect, and knowledge of nondiscriminatory testing procedures are necessary when working with nonmainstream dialect populations.
CHAPTER 3
METHODS AND PROCEDURES

Subjects

Twenty-two kindergarten and first-grade students, ranging in age from 6-0 to 6-11 years, selected from three public elementary schools in Avery County, North Carolina, served as subjects for this study.

Method of Subject Selection

A case-history form was sent to the parents of every six-year-old child in kindergarten and first grade at three public elementary schools in Avery County. The information obtained from the case-history forms provided potential subjects and essential information on each subject. The subjects to be used in the study were then selected according to the following criteria from the case-history information: 1) chronological age (subjects must be between the ages of 6-0 and 6-11), 2) length of residency in the Appalachian region (subjects must be born natives of the area and parents must have lived
in the area for at least 15 years), 3) hearing acuity (subjects must have normal hearing bilaterally when screened at 25dB for 500-4000Hz), 4) subjects must have no abnormal orofacial structure or function that might contribute to a speech disorder, and 5) subjects must have average level of academic performance as reported by the teacher (normal academic performance level as compared to the child's peers).

Two graduate speech clinicians were trained in the screening procedures to assure accuracy of administration and interpretation. Each subject was given: 1) a bilateral hearing screening at 25dB for 500-4000Hz and 2) an oral peripheral examination to determine if any structural anomalies were present. Table 1 presents the age and sex of the 22 subjects chosen for this study.
Table 1
Age and Sex of Subjects Chosen for Study

<table>
<thead>
<tr>
<th>Subject</th>
<th>Age</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6-0</td>
<td>Male</td>
</tr>
<tr>
<td>2</td>
<td>6-4</td>
<td>Female</td>
</tr>
<tr>
<td>3</td>
<td>6-8</td>
<td>Male</td>
</tr>
<tr>
<td>4</td>
<td>6-4</td>
<td>Female</td>
</tr>
<tr>
<td>5</td>
<td>6-5</td>
<td>Female</td>
</tr>
<tr>
<td>6</td>
<td>6-8</td>
<td>Female</td>
</tr>
<tr>
<td>7</td>
<td>6-7</td>
<td>Male</td>
</tr>
<tr>
<td>8</td>
<td>6-4</td>
<td>Male</td>
</tr>
<tr>
<td>9</td>
<td>6-10</td>
<td>Male</td>
</tr>
<tr>
<td>10</td>
<td>6-6</td>
<td>Male</td>
</tr>
<tr>
<td>11</td>
<td>6-10</td>
<td>Female</td>
</tr>
<tr>
<td>12</td>
<td>6-11</td>
<td>Female</td>
</tr>
<tr>
<td>13</td>
<td>6-6</td>
<td>Male</td>
</tr>
<tr>
<td>14</td>
<td>6-5</td>
<td>Female</td>
</tr>
<tr>
<td>15</td>
<td>6-2</td>
<td>Male</td>
</tr>
<tr>
<td>16</td>
<td>6-0</td>
<td>Female</td>
</tr>
<tr>
<td>17</td>
<td>6-7</td>
<td>Male</td>
</tr>
<tr>
<td>18</td>
<td>6-11</td>
<td>Female</td>
</tr>
<tr>
<td>19</td>
<td>6-3</td>
<td>Female</td>
</tr>
<tr>
<td>20</td>
<td>6-1</td>
<td>Female</td>
</tr>
<tr>
<td>21</td>
<td>6-2</td>
<td>Female</td>
</tr>
<tr>
<td>22</td>
<td>6-0</td>
<td>Male</td>
</tr>
</tbody>
</table>

Mean age: 6-4

Testing
Following subject selection, testing was done using the following speech-language screening instruments:

1. The Fluharty Preschool Speech and Language Screening Test (N.B. Fluharty, 1978). This test is designed for children ages two through six years, to
elicit responses that indicate vocabulary, articulation, and language performance. This screening tool does allow for Black dialect usage and so indicates in the protocol.

2. The Florida Language Screening System FLASC (University of Florida Department of Speech, 1974). The FLASC is designed to identify possible language disorders in kindergarten and grade one children. This screening tool measures both receptive and expressive use of phonology, the comprehension, retrieval, and production of vocabulary items, the receptive and expressive use of syntax, the understanding and appropriate use of the meaning system of language. The FLASC was standardized on 3,000 children throughout the state of Florida.

3. The Tennessee Test of Appalachian Language (TN TAL, an unpublished screening test developed by the University of Tennessee Satellite Outreach Programs in Language, Speech, and Hearing). The test has been normed on five- to seven-year olds in the Appalachian regions of Tennessee and West Virginia. This screening tool reportedly provides the speech-language pathologist with a measure of the adequacy of language skills of Appalachian children (Catlett, Higgs, Horner, Merritt, & Watkins, 1980).
It also allows the speech-language pathologist in the public schools to test a large number of children in a relatively short period of time.

Data Analysis

The data were analyzed using a paired t-test to determine if there was a statistically significant difference in the mean time of administration among the Tennessee Test of Appalachian Language, the Fluharty Preschool Speech and Language Screening Test, and the Florida Language Screening System at the .01 level of significance. A group t-test was used to determine the correlation between the mean scores of children tested in North Carolina and the children tested in Tennessee on the Tennessee Test of Appalachian Language at the .01 level of significance.
CHAPTER 4
RESULTS

Introduction

The purpose of this study was to compare the results of the Tennessee Test of Appalachian Language, the Fluharty Preschool Speech and Language Screening Test, and the Florida Language Screening System according to: 1) length of administration time and 2) number of children that passed or failed the tests. From these data, an attempt was made to determine if the Tennessee Test of Appalachian Language is a culture-fair screening tool when used with children who speak Appalachian dialect in western North Carolina. Information relative to the population used and the tests' results appear in Appendices A through E. These include the breakdown of subject data on the children tested in North Carolina; the subjects' raw score range, mean score, median, and mode on the Tennessee Test of Appalachian Language; and the subjects' age range, age mean, median, and mode.
Analysis of Data

To test the null hypothesis, that the *Tennessee Test of Appalachian Language* is not a culture-fair screening tool when used with children who are identified as using Appalachian dialect in western North Carolina, a group t-test at the .01 level of significance was used to determine the correlation between the mean scores of the children tested in North Carolina and the children tested in Tennessee. The .01 level of significance suggests that a sampling error could occur once in every 100 replications of the experiment (Best, 1981). The homogeneity of variance between the two groups of subjects (i.e. North Carolina children and Tennessee children) was tested by using the F-test. In this study the t-value of the F-test was found to be significant; thus, it was assumed that the two populations used in this study were considered to be different according to their scores on the *Tennessee Test of Appalachian Language*. In such a case, the separate variance estimate was used to determine if there was a statistically significant difference between the scores of the children in North Carolina and the children in Tennessee on the *Tennessee Test of Appalachian Language*. The t-value of the mean scores
collected from the two populations on the **Tennessee Test of Appalachian Language** was 5.63. Therefore, the null hypothesis can be accepted using this particular population.

To test the second null hypothesis, that there is no statistically significant difference among the **Tennessee Test of Appalachian Language**, the **Fluharty Preschool Speech and Language Screening Test**, and the **Florida Language Screening System** insofar as the time of administration and the rate of the number of children passing and the number of children failing each test was concerned, a paired t-test at the .01 level of significance and Chi Square were used. The mean administration time for each screening instrument, when used in this study, is presented in Table 2. The t values of the mean administration times collected in this study are presented in Table 3. When referring to the t-values of the screening tools it can assumed that there was a significant difference between the administration times of the Fluharty and FLASC and the FLASC and TN TAL when compared. There appeared to be no significant difference between the Fluharty and TN TAL insofar as time of administration was concerned.
Table 2

Mean Administration Times for Screening Instruments Used in this Study

<table>
<thead>
<tr>
<th>Screening Tool</th>
<th>Mean Administration Time in Seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluharty Preschool Speech and Language Screening Test (Fluharty)</td>
<td>293</td>
</tr>
<tr>
<td>Florida Language Screening System (FLASC)</td>
<td>261</td>
</tr>
<tr>
<td>Tennessee Test of Appalachian Language (TN TAL)</td>
<td>302</td>
</tr>
</tbody>
</table>

Table 3

T-Values of the Mean Administration Times Collected in this Study

<table>
<thead>
<tr>
<th>Screening Tools</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluharty and FLASC</td>
<td>3.49</td>
</tr>
<tr>
<td>Fluharty and TN TAL</td>
<td>-0.67</td>
</tr>
<tr>
<td>FLASC and TN TAL</td>
<td>-2.96</td>
</tr>
</tbody>
</table>

The Chi Square test is "used to estimate the likelihood that some factor other than chance (sampling error) accounts for the apparent relationship" between variables (Best, 1981, p. 287). The number of children passing and the number of
children failing each test could not be compared in this study because none of the students failed the Fluharty or the FLASC and only five students failed the TN TAL. Therefore, the second null hypothesis can be accepted when referring to the mean time of administration for each of the screening tests used in this study.
CHAPTER 5
SUMMARY, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS

Introduction

Chapter 5 provides a summary of the study and draws conclusions from the data. Implications are also made from the study based on the statistical analysis of the data and recommendations for further study are given.

Summary

The purpose of this study was to compare the results of three language screening tests (Tennessee Test of Appalachian Language, Fluharty Preschool Speech and Language Test, and Florida Language Screening System) administered to nonstandard English speakers using the following criteria: 1) length of administration time and 2) number of children who passed or failed the tests. From these data, an attempt was made to determine if the Tennessee Test of Appalachian Language is a culture-fair screening tool when given to children who speak Appalachian dialect in the North Carolina mountains.
The literature related to this subject was reviewed and reported under three headings: (1) Relationship Between Language and Culture, (2) Dialect Differences in Education, and (3) Dialects and Testing Procedures; including topics such as description of Appalachian English, dialect difference or disorder, and state and federal guidelines for services.

Twenty-two kindergarten and first grade students, ranging in age from 6-0 to 6-11 years, selected from three public elementary schools in Avery county, North Carolina, served as subjects for this study. Each subject was given a battery of three speech and language screening tests and the resulting data were subjected to a paired t-test and a group t-test.

Conclusions

The mean administration times for each screening instrument, when used in this study, suggest that there was a significant difference between the administration times of the Fluharty and FLASC and the FLASC and TN TAL when compared. There appeared to be no significant difference between the Fluharty and TN TAL. The number of children passing and the number of children failing each screening instrument could not be compared in this study. According to the
subjects' scores on the Tennessee Test of Appalachian Language it was assumed that the two populations in this study were considered to be different.

Implications

The literature suggests that children who speak a nonmainstream dialect will experience difficulties in education, be erroneously diagnosed as communicatively impaired, and more particularly, experience difficulties on standardized tests used in education. The test scores in this study revealed no significant differences between standard English screening instruments and an Appalachian English screening instrument. Given these results it is felt by this writer that a breakdown on standardized testing may occur during a more indepth evaluation on speech and language, rather than on a screening tool.

Recommendations

Several recommendations for further study in the area of nonmainstream dialects can be made. The following are recommendations for future research.

The writer recommends that the vocabulary of nonmainstream speakers be compared with the vocabulary of standard English speakers.
A study comparing the results of standard English and nonstandard English speakers on a speech and language evaluation instrument is recommended.

It is also recommended that all Speech-Language Pathologists working with nonmainstream speakers develop their own local norms for speech and language testing instruments.
BIBLIOGRAPHY


APPENDIX A

Breakdown of Subject Data on Children Tested in North Carolina
### Breakdown of Subject Data on Children Tested in North Carolina

<table>
<thead>
<tr>
<th>Subject</th>
<th>Age</th>
<th>Sex</th>
<th>Flu-Harty Score</th>
<th>Time In Sec</th>
<th>Flasc Score</th>
<th>Time In Sec</th>
<th>Tn Tal Score</th>
<th>Time In Sec</th>
<th>Free Lunch Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6-0</td>
<td>M</td>
<td>64</td>
<td>272</td>
<td>42</td>
<td>215</td>
<td>25</td>
<td>331</td>
<td>yes</td>
</tr>
<tr>
<td>2</td>
<td>6-4</td>
<td>F</td>
<td>63</td>
<td>320</td>
<td>37</td>
<td>357</td>
<td>24</td>
<td>306</td>
<td>yes</td>
</tr>
<tr>
<td>3</td>
<td>6-8</td>
<td>M</td>
<td>64</td>
<td>355</td>
<td>35</td>
<td>247</td>
<td>23</td>
<td>288</td>
<td>yes</td>
</tr>
<tr>
<td>4</td>
<td>6-4</td>
<td>F</td>
<td>64</td>
<td>245</td>
<td>37</td>
<td>271</td>
<td>24</td>
<td>267</td>
<td>no</td>
</tr>
<tr>
<td>5</td>
<td>6-5</td>
<td>F</td>
<td>62</td>
<td>272</td>
<td>39</td>
<td>242</td>
<td>26</td>
<td>417</td>
<td>yes</td>
</tr>
<tr>
<td>6</td>
<td>6-8</td>
<td>F</td>
<td>64</td>
<td>286</td>
<td>38</td>
<td>238</td>
<td>25</td>
<td>346</td>
<td>no</td>
</tr>
<tr>
<td>7</td>
<td>6-7</td>
<td>M</td>
<td>65</td>
<td>310</td>
<td>40</td>
<td>311</td>
<td>26</td>
<td>298</td>
<td>no</td>
</tr>
<tr>
<td>8</td>
<td>6-4</td>
<td>M</td>
<td>63</td>
<td>293</td>
<td>41</td>
<td>310</td>
<td>23</td>
<td>348</td>
<td>no</td>
</tr>
<tr>
<td>9</td>
<td>6-10</td>
<td>M</td>
<td>63</td>
<td>307</td>
<td>43</td>
<td>210</td>
<td>25</td>
<td>289</td>
<td>no</td>
</tr>
<tr>
<td>10</td>
<td>6-6</td>
<td>M</td>
<td>62</td>
<td>301</td>
<td>33</td>
<td>246</td>
<td>21</td>
<td>358</td>
<td>no</td>
</tr>
<tr>
<td>11</td>
<td>6-10</td>
<td>F</td>
<td>63</td>
<td>352</td>
<td>37</td>
<td>239</td>
<td>23</td>
<td>201</td>
<td>yes</td>
</tr>
<tr>
<td>12</td>
<td>6-11</td>
<td>F</td>
<td>64</td>
<td>245</td>
<td>33</td>
<td>245</td>
<td>23</td>
<td>220</td>
<td>yes</td>
</tr>
<tr>
<td>13</td>
<td>6-6</td>
<td>M</td>
<td>64</td>
<td>332</td>
<td>33</td>
<td>285</td>
<td>18</td>
<td>376</td>
<td>yes</td>
</tr>
<tr>
<td>14</td>
<td>6-5</td>
<td>F</td>
<td>64</td>
<td>292</td>
<td>42</td>
<td>245</td>
<td>22</td>
<td>402</td>
<td>yes</td>
</tr>
<tr>
<td>15</td>
<td>6-2</td>
<td>M</td>
<td>64</td>
<td>310</td>
<td>42</td>
<td>275</td>
<td>22</td>
<td>354</td>
<td>yes</td>
</tr>
<tr>
<td>16</td>
<td>6-0</td>
<td>F</td>
<td>59</td>
<td>275</td>
<td>38</td>
<td>264</td>
<td>26</td>
<td>240</td>
<td>yes</td>
</tr>
<tr>
<td>17</td>
<td>6-7</td>
<td>M</td>
<td>65</td>
<td>248</td>
<td>37</td>
<td>232</td>
<td>23</td>
<td>245</td>
<td>no</td>
</tr>
<tr>
<td>18</td>
<td>6-11</td>
<td>F</td>
<td>65</td>
<td>280</td>
<td>36</td>
<td>252</td>
<td>25</td>
<td>230</td>
<td>no</td>
</tr>
<tr>
<td>19</td>
<td>6-3</td>
<td>F</td>
<td>63</td>
<td>350</td>
<td>34</td>
<td>288</td>
<td>24</td>
<td>301</td>
<td>no</td>
</tr>
<tr>
<td>20</td>
<td>6-1</td>
<td>F</td>
<td>63</td>
<td>285</td>
<td>29</td>
<td>309</td>
<td>23</td>
<td>304</td>
<td>yes</td>
</tr>
<tr>
<td>21</td>
<td>6-2</td>
<td>F</td>
<td>65</td>
<td>258</td>
<td>35</td>
<td>268</td>
<td>22</td>
<td>282</td>
<td>yes</td>
</tr>
<tr>
<td>22</td>
<td>6-0</td>
<td>M</td>
<td>64</td>
<td>275</td>
<td>42</td>
<td>212</td>
<td>26</td>
<td>268</td>
<td>no</td>
</tr>
</tbody>
</table>
APPENDIX B

Age Range, Mean Age, Median, Mode for Children Tested in North Carolina
AGE RANGE, MEAN AGE, MEDIAN, MODE FOR CHILDREN TESTED IN NORTH CAROLINA*

Age Range (in months) 72.0 - 83.0
Mean Age 77.18
Median 77.0
Mode 72.0

*No statistically significant difference between the ages of the North Carolina subjects and the Tennessee subjects was noted.
APPENDIX C

Age Range, Mean Age, Median, Mode for Children Tested in Tennessee
AGE RANGE, MEAN AGE, MEDIAN, MODE FOR CHILDREN TESTED IN TENNESSEE*

<table>
<thead>
<tr>
<th>Age Range (in months)</th>
<th>72.0 - 83.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td>76.63</td>
</tr>
<tr>
<td>Median</td>
<td>76.13</td>
</tr>
<tr>
<td>Mode</td>
<td>72.0</td>
</tr>
</tbody>
</table>

*No statistically significant difference between the ages of the North Carolina subjects and the Tennessee subjects was noted.
APPENDIX D

Raw Score Range, Mean Score, Median, Mode for Children Tested in North Carolina on the *Tennessee Test of Appalachian Language*
RAW SCORE RANGE, MEAN SCORE, MEDIAN, MODE FOR CHILDREN TESTED IN NORTH CAROLINA ON THE TENNESSEE TEST OF APPALACHIAN LANGUAGE

<table>
<thead>
<tr>
<th>Raw Score Range</th>
<th>18.0 - 26.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Score</td>
<td>23.59</td>
</tr>
<tr>
<td>Median</td>
<td>23.50</td>
</tr>
<tr>
<td>Mode</td>
<td>23.0</td>
</tr>
</tbody>
</table>
APPENDIX E

Raw Score Range, Mean Score, Median, Mode for Children Tested in Tennessee on the Tennessee Test of Appalachian Language
### Raw Score Range, Mean Score, Median, Mode for Children Tested in Tennessee on the Tennessee Test of Appalachian Language

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Score Range</td>
<td>15.0 - 27.0</td>
</tr>
<tr>
<td>Mean Score</td>
<td>18.63</td>
</tr>
<tr>
<td>Median</td>
<td>18.0</td>
</tr>
<tr>
<td>Mode</td>
<td>15.0</td>
</tr>
</tbody>
</table>
VITA

Diane Sanderson Meiburg was born in Syracuse, New York on September 24, 1960. She has lived in North Carolina since 1974 and graduated from Cary Senior High School in 1978. The following August she entered Appalachian State University, and in May 1982, she received a Bachelor of Science degree in Speech Pathology. In August of 1982 Ms. Meiburg began work toward her Master's degree in the area of Speech Pathology at Appalachian State University. The following August she accepted a position in Asheville, North Carolina serving the Asheville City Schools, where she is now employed. While working for the Asheville City School System, Ms. Meiburg completed her Master of Arts Thesis and her degree was granted in December, 1987.