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**ASSESSING THE APPLICABILITY OF THE
PEABODY PICTURE VOCABULARY TEST-REVISED TO
MONTANA FLATHEAD INDIAN RESERVATION CHILDREN**

By

Lori Ann Hanson

B.S., Northern Michigan University, 1984

Presented in partial fulfillment of the requirements
for the degree of

Master of Arts

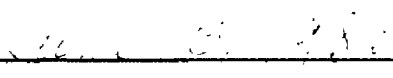
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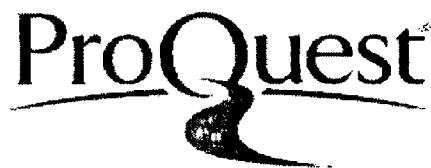


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The time is short, the hour is late,
the matter is urgent. It is not ours
to finish the task, but neither
are we free to desist from doing
all we possibly can.

The Talmud

Hanson, Lori A., M.A., June 1988

Communication Sciences and
Disorders

Assessing the Applicability of the Peabody Picture Vocabulary Test-Revised to Montana Flathead Indian Reservation Children (85 pp.)

Director: Randy Weirather, Ph.D. *RW*

Present day speech-language pathologists are increasingly faced with the task of assessment and treatment of culturally and linguistically diverse populations. Numerous approaches to this challenge are discussed in this paper. The study was designed to address one option--that of determining a need for local norms. The researcher asked if the national norms on the PPVT-R are applicable to school age children on the Flathead Reservation in Montana.

One hundred five children were to be sampled from grades one, four, and eight--twenty-five Native American children (according to Title IV eligibility requirements) and ten other children from each grade. Average standard scores (for groupings by age, ethnicity, and school) were to be compared to the national norms through the use of a t test. Further, the proportions of children within each age group correctly responding to each PPVT-R item were to be calculated, allowing the researcher to examine the items for bias or ordering problems.

The study was discontinued when the researcher became aware that adequate steps had not been taken to obtain the necessary support to conduct the study. It seemed that support should have been sought from either the local Indian Parent Advisory Groups or the Tribal Education Committee (TEC). The researcher met with the TEC after the permission slips had been sent home. The TEC offered to work with the researcher to determine if support should be granted, but acknowledged that this could be a lengthy process.

The obstacles encountered in the process of attempting this study are discussed in Chapter III and summarized in Chapter IV. These included the lack of an established protocol for conducting research on reservations, requirements of a legalistic paragraph in consent forms, accessibility of data from the schools on individuals rather than groups, and the time involvement in obtaining permission and support from the University of Montana and the TEC. Additionally, Chapter IV provides information related to education and funding of education for Native Americans. The intent is to provide information which future researchers might find helpful in planning and implementing similar studies.

AUTHOR'S NOTE

In addition to the three copies of this paper required for the University of Montana, this author has distributed copies of this paper to the following people:

Larry LaCount, Superintendent in Arlee, Montana

Bob Halgren, Superintendent in Ronan, Montana

Clayton Matt, Chairman, Tribal Education Committee

Douglas Morigeau, Dean of Students, Salish-Kootenai College

Bob Bigart, Librarian, Salish-Kootenai College

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My thanks also extends to those who showed interest in the study, who made suggestions, and who supported my efforts. These included the following: Larry LaCount, Harold Brown, Bob Halgren, Terri O'Fallon, Jim Gillhouse, Clayton Matt, Douglas Morigeau, Charles Lewis, Kathy Carlson, Tammie Elser, Rich Clow, Nancy Mattina, and Jean Parker.

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CHAPTER I

Introduction

The responsibilities of today's speech-language pathologist are many and varied, ranging from provision of therapy to public relations and education. One of the more traditional responsibilities of the speech-language pathologist is to determine a client's level of functioning by collecting data. Standardized tests are frequently used tools of data collection. Standardized test scores may lend themselves to apparent ease of interpretation, to legislative needs, and to use as classification descriptors. For example, some speech-language pathologists serve those children whose scores fall below a certain level, perhaps two standard deviations below the mean. Some school systems require that a child fall below a certain standard deviation or percentile rank before that child is considered delayed or disordered and special services are provided. Further, I.Q. scores account for much of the classifications of mental retardation (State of Montana Office of Public Instruction, 1985).

It is the responsibility of the speech-language pathologist to ensure that standardized tests are used appropriately--from initial test selection and administration to test interpretation. The interpretation of results of standardized tests may be complicated when the client differs from the standardization sample. It has been suggested that

the following characteristics of an individual may affect test performance: language experience and knowledge, cultural experiences, ethnicity, cognitive or learning style, education, school attendance, test taking skills, and socioeconomic status. In such cases, the published norms may be inappropriate without numerous qualifiers. Practicing speech-language pathologists may often find themselves with clients who differ from standardization samples of the various tests available. This paper describes several approaches to dealing with biased standardized tests.

This study attempted to examine the appropriateness of using the Peabody Picture Vocabulary Test-Revised (PPVT-R, Dunn and Dunn, 1981), or, more specifically, the use of the published test norms for interpretation with the school-age population living on the Flathead Reservation in Arlee and Ronan, Montana, with special attention to the Native American Indian population.

Review of the Literature

Assessment of Nonstandard Populations

The use of the PPVT-R with Native Americans is directly related to the more general issue of using standardized tests with nonstandard populations--those populations omitted from or meagerly represented in the standardization sample. The standard samples often consist mainly of white, middle-class individuals. Blacks, Hispanics, and Native Americans are poorly represented in most standardization samples. With

nonstandard populations, the validity of standardized tests and the appropriateness of the established norms should be questioned. For example, the potential for cultural bias in standardized tests has been implicated as a possible cause of lower I.Q. scores for Blacks than for Whites. This has led to the development of a test based on the language and experience of the Black culture, the Black Intelligence Test of Cultural Homogeneity-100 (BITCH-100) by Williams (1972).

Bias in assessment, with testing being a component of assessment, has been implicated in the disproportionate number of Black children in Special Education (Tucker, 1980). Gerry (1973) stated that the over-representation of minorities in Special Education classes was the result of an over-referral of minorities by teachers and the subsequent use of inappropriate tests and procedures. Bailey and Harbin (1980) stated bias must be eliminated from: "(a) referral, (b) testing, (c) interpretation of results, (d) determination of eligibility, (e) recommendation for placement, and (f) actual placement" (p. 594).

The potential for bias is not unique to the assessment of intelligence, but exists also in the assessment of speech and language skills. Several authors have offered alternatives to the use of standardized tests or have recommended modifications to standardized tests to reduce the effects of bias in assessment. These are discussed below.

Culture Free Tests

A culture free test would consist of individual test items which are not culturally bound or biased. The administration procedures would also be free of cultural bias. If such a test could be devised, however, it might be too general to assess anything. Duffey, Salvia, Tucker, and Ysseldyke (1981) and Mercer (1979) have argued that the development of culture free testing is impossible. Tests assess that which has been learned and "all learning takes place in a sociocultural setting" (Mercer, 1979, p. 23). A person's particular speech and language skills are learned in a particular culture and may not possibly be adequately sampled apart from that culture.

Culture Fair Tests

A culture fair test would make no claims regarding elimination of culturally biased items. Instead, such a test would attempt to quantitatively balance the biases of the test content. Mercer (1979) described four approaches to culture fair testing. One approach is to construct a test whose total content is equally familiar or equally unfamiliar to those taking the test. Such tests are necessarily difficult to construct. According to Laosa (1977), they would often consist of untimed, nonverbal tasks.

A second approach to ensuring cultural fairness would be to construct a test containing an equal number of biased items from each cultural group to be tested. One difficulty with

this approach is the problem of equalizing the bias of the items across various groups. Duffey et al. (1981) have pointed out the poor predictive validity of such tests. A person exists in only one cultural milieu at one time (although switching is possible over time) and these tests do not adequately sample behavior in any one cultural milieu. As Mowder (1982) stated, "one test can't be universally appropriate...and still assess important psychological characteristics" (p. 18).

Mercer's (1979) third approach consists of obtaining a measure of learning potential through a test-train-retest paradigm. One potential bias of a test is the comparison of children who have not had the same opportunity to learn something. By providing the same opportunity to all the children in training, this particular bias of a test may be reduced or eliminated. This may be "fair" if the training techniques are not biased and if the measurement device is adequately sensitive and valid.

The fourth approach described by Mercer (1979) is the use of Piagetian tasks to assess levels of cognitive functioning. Laosa (1977) has suggested that this approach is appropriate because cognitive development appears to be similar across cultures on such tasks. Duffey et al. (1981) have argued against the use of Piagetian tests because they believed these tests lacked adequate predictive validity.

Culture Specific Tests

Culture specific tests attempt only to sample behaviors associated with one cultural group. The BITCH-100 was developed by Williams (1972) as a culture specific vocabulary test for adolescents and adults. Items from the BITCH-100 clearly demonstrated the need for specific language learning experiences in order to do well on the test. Beyond that demonstration, the BITCH-100 has limited utility (Vaughn-Cooke, 1986).

While considering development and use of culture specific tests, one should keep in mind their limited utility in predicting functioning in a variety of contexts.

If members of any subgroup are likely to move into and become functioning members of the larger social group, the use of currently accepted (valid, well-standardized and properly administered) tests is appropriate, to the extent that such movement occurs. In a socially mobile society such as ours, current good tests have a greater range of applicability than emotionally motivated protests against their use would suggest. (Newland, 1973, pp. 319-320)

Translations

Tests which are developed and standardized in one language/dialect may be translated into the language or dialect of the "nonstandard" person to be tested. This has already been accomplished on some tests such as the Test of Auditory Comprehension of Language (Carrow, 1973) which was translated into Spanish. The Peabody Picture Vocabulary Test (Dunn, 1965) and the Assessment of Children's Language

Comprehension (Foster, Giddan, and Stark, 1973) have also been translated into Spanish by Moreau (1967) and Masion (1973), as cited in Evard and Sabers (1979).

One difficulty with translations of standardized tests is that the translations themselves often change the difficulty of each individual test item and new norms must be established on this translated test (Duffey et al., 1981; Mattes & Omark, 1984). Adequate norms have not been reported for any of the above versions (Evard & Sabers, 1979). DeBlassie and Franco (1983) and Mowder (1982) pointed out that dialectical differences may interfere with a client's performance on the translated test and limit its utility. Further, a translated test involving reading may be impossible for the child who speaks his native language, but does not read or write it. Finally, as Mattes and Omark (1984) noted, translations of existing speech/language tests may fail to assess various features unique to the second language.

Adaptations of Existing Tests

There are various test adaptations which may be very appropriate, but the examiner must recognize that the published norms would no longer be appropriate because the test itself had been altered (Duffey et al., 1981). Mattes and Omark (1984) suggested that modifications of test content (e.g. individual items changed or omitted) should be implemented (a) when they are deemed appropriate by fluent speakers of the local dialect or (b) as dictated by the

performance of a randomly selected group from the minority population on the individual test items.

Mercer (1979) recommended that the weighting of various components of a test be changed so that the interpretation of the test results might be less likely biased (e.g. credit nonverbal skills more than verbal skills). She also suggested that timed tests be untimed, assuming that all "normal" persons would perform equally well, given adequate time.

The scoring criteria of some language tests have been adapted to allow for linguistic differences. The Developmental Sentence Scoring Technique by Lee (1974) and the Carrow Elicited Language Inventory by Carrow (1974) have both been subjected to scoring modifications to credit responses in Black English by Nelson (1976, as cited in Vaughn-Cooke, 1983) and Hemingway, Montague, and Bradley (1981), respectively.

Test Taking Training

Adler (1968) pointed out that "a test is a cultural artifact" (p. 365). Testing is valued and practiced in some cultures, but not in others. One way to counter this particular cultural bias, where it may exist, would be to teach examinees about tests and how to take them. Duffey et al. (1981) stated it may be helpful, but it is time consuming and does not address the bias in the basic decision-making of assessment. Oakland (1972) attempted to teach "test-wiseness" to a group of Head Start children and measured the effects of this training by administering pre-training and post-training

tests to the group receiving training. He administered the same tests to a group that did not receive training. He found the trained group showed greater improvement from the pre- to the post-training tests than did the group which received no training. Yet, four months later, the two groups performed similarly on standardized tests.

Criterion-Referenced Tests

A criterion-referenced test specifies behaviors to be measured and criterion levels to be targeted. Scores are not compared to those of other individuals tested as in a norm-referenced test (Vaughn-Cooke, 1983). Criterion scores are useful for profiling a person's abilities and planning appropriate education/intervention strategies (Oakland and Matuszek, 1977). Bergquist (1982), for example, utilized criterion-referenced tests in a time-series design to determine if and when to intervene for children considered "at risk". These children were evaluated once each month to note rate and areas of learning. If intervention was begun, the evaluation procedure was continued with an eye towards increased learning rate.

Ysseldyke and Regan (1980) also advocated a focus on "an N of one". They suggested that assessment of all children begin in the regular classroom. The teachers must then document the failure of at least three different teaching strategies before referring the child for outside placement. This type of model and, to a lesser degree, more traditional

uses of criterion-referenced tests, may be costly in terms of time and money (Duffey et al., 1981). Bailey and Harbin (1980), Drew (1973), Mowder (1982), Oakland and Matuszek (1977) Vaughn-Cooke (1983), and Vaughn-Cooke (1986) have stated that criterion-referenced tests are not necessarily free from bias just because there is no apparent norm-reference. Bias may be present in the test design, the test items, the administration procedures, the developmental sequence assumed or adopted (from some standard sample), and the established criterion level.

Inclusion of Some Minorities in the Standardization Sample

Inclusion of some minorities in the standardization sample was utilized in the standardization of such tests as the Illinois Test of Psycholinguistic Abilities (Kirk, McCarthy, and Kirk, 1968), the Basic Language Concepts Test (Englemann, Ross, and Bingham, 1982), and the PPVT-R. Their inclusion provided little information about the expected performance of the minority groups (Vaughn-Cooke, 1986). In fact, Weiner and Hooch (1973) argued that the inclusion of a few Black subjects in the norming of the ITPA was worse than including none because "they simply reduce the extent to which the sample represents the 'average' white population" (p. 621).

Language Sampling

Language sampling may appear to some as a viable alternative to standardized language testing because it

provides an opportunity to collect information in a variety of natural contexts. Further, it allows for sampling of those culture-specific language structures and functions which may not be adequately sampled by standardized tests. Vaughn-Cooke (1986) argued that language sampling is not the best option at the current time. She explained two basic problems: (a) language samples do not allow for identification of disordered language apart from normal language and (b) the developmental sequences used to analyze language samples are currently based on the language development of some particular population--usually middle-class, white children. Mattes and Omark (1984) stated that disordered language can be discriminated from normal language if a reference for normal is established through systematic observation of communication in a variety of contexts within the cultural group and through interviews with adult language users within the cultural group. They suggested elicited imitation (repetition tasks) may also be useful with culturally diverse groups.

Local Norms on Existing Tests

Establishment of local norms on existing tests may allow for more appropriate comparisons. Oakland and Matuszek (1977) and Tucker (1977) advocated the use of local norms to disallow the "inappropriate" comparisons of a normal minority person with a normal person from the majority culture. More appropriate norms would compare those who have had "similar

opportunities and experiences" (Bailey and Harbin, 1980, p. 593).

Caution should be employed, however, in test interpretation with local norms. For example, a receptive language test developed and normed with middle-class whites and re-normed on a minority population may best be viewed as a test of understanding middle-class white language as opposed to some universal construct of receptive language. Along the same line, ethnic norms which are lower than the published norms may be inappropriately interpreted to suggest that these groups are delayed or less intelligent as a whole rather than to suggest the possibility of test bias (Vaughn-Cooke, 1986). Laosa (1977) and Vaughn-Cooke (1983) expressed concern that the development of local normative frameworks failed to examine the reasons behind differences in performances of various groups. Additionally, Bailey and Harbin (1980) noted that exclusive use of local norms "actually works against the child's mobility" (p. 594). If a child demonstrates skills of his local peers, but not those of his national peers, he may not be able to compete outside his local region.

Pluralistic Assessment

Pluralistic assessment is a process of considering a person's socioeconomic and cultural background to determine the normative framework to be viewed in interpreting that person's score on a norm-referenced test. This would involve the establishment of multiple normative frameworks for the

tests to be used (similar to, but more extensive than the establishment of local norms). Mercer (1979) prepared a manual to describe SOMPA, a System of Multicultural Pluralistic Assessment. In this model, one assumes that group differences on measures such as IQ are the result of socioeconomic and cultural differences and not some innate or genetic characteristic of the people tested. Just as separate norms are provided for different age groups, separate norms should be developed for linguistically, economically, and culturally different groups.

The procedures in the SOMPA do not change the content or language of the test or the testing procedures. Instead they assume that all tests ...are tests of learned material, and that inferences about a child's learning potential can be made if the child's performance is compared only with others who have come from a similar sociocultural setting and presumably, have had the same opportunity to learn that material, and the same test-taking experience. The technical problem is one of identifying as precisely as possible the appropriate normative framework within which to interpret each child's performance, so that he or she is compared only with others who have come from a similar ethclass. (Mercer, 1979, p. 53)

Mowder (1982) stated and Mercer (1979) acknowledged that pluralistic assessment also has problems (aside from the enormity of the task). If a child is not succeeding in the school setting, but is found to be within normal limits for his ethclass (ethnic group and socioeconomic class), this child may go unserved and continue to fail in the school. Many schools do not provide special services to those not labeled defective or disordered.

Moratorium

Although not an adequate alternative to assessment, a moratorium on the use of standardized tests has been called by various groups such as the NAACP and the Association of Black Psychologists. "Their goal is to dramatize the issue and highlight the urgent nature of the situation" (Vaughn-Cooke, 1986, p. 34).

None of these alternatives appear to provide easy solutions to the problems of bias in assessment. This bias must be identified and dealt with at all steps in assessment and intervention as described by Bailey and Harbin (1980) and noted above. The various alternatives may be useful in answering different questions (for example, What are the individual's strengths and weaknesses?--criterion-referenced test; How does the individual compare to the average of his minority culture?--pluralistic norms; How does the individual compare to the average of the majority culture?-national norms). As Bailey and Harbin (1980) stated:

The elimination of bias and good decision-making are two separate goals. One is a social, legal, and ethical problem, the other is an education programming problem. (p. 595)

Native Americans

As noted earlier in this paper, test performance may be affected by a variety of characteristics of the group or individual tested. These characteristics include language experience, cultural experience, ethnicity, cognitive or

learning style, education, school attendance, test taking skills, and socioeconomic status. Several characteristics of Native Americans and research findings are discussed below.

The Population

Goodman (1985) described the Native American population in terms of demographic and economic information drawn from the 1980 United States Census. In general, the following descriptors were provided. In 1980, Native Americans accounted for 0.6% of the population of the United States. About half lived in urban areas, 25-30% lived on reservations and the rest lived in rural, non-reservation areas. The average income of the Native American was significantly lower than the national average. Unemployment rates among Native Americans were two to four times greater than national rates.

In 1980, Montana was home for 2.5-4.9% of the total American Indian population. Also, 2.5-4.9% of the population of Montana were American Indian. Finally, slightly more than half of the reservation population in Montana were not American Indian (Goodman, 1985). It should be noted that this information can not be viewed as highly reliable because of (a) problems with the definition of "Indian", (b) the language differences in data collection, and (c) the lack of literacy in some areas where information was sought through mailed surveys.

Speech-Language Skills and Behaviors

Researchers have investigated the influence of Native American languages and cultures on English language learning and the influence of the English language and Anglo culture on Native American languages. Osborn (1974) discussed the history of storytelling among Native Americans. The valuing of storytelling has resulted in a cultural respect for exact repetition and training in silence, skills developed through storytelling. Additionally, time to perceive the world and develop an inner calm is valued above time to express.

Holm, Holm, and Spolsky (1973) examined English "loan words" in the Navajo language of six year old Navajo children. They looked for actual English words in speech samples of children conversing in their native Navajo language. Such words were labeled loan words. In 1941, there were "practically no English loan words", while in 1971, nine percent of the different words used were English loan words.

Cook (1973) examined essays written in English by Native American children who spoke various Indian languages. She found the errors to be highly similar regardless of the Indian language spoken. She made no attempt to explain, in detail, possible reasons for these errors. Instead she used this information to make suggestions to teachers of these children for teaching written language skills.

While Cook described the similarities of written English difficulties among a variety of Native American language

speakers, Weaver (1974) discussed spoken English difficulties which might be anticipated due to differences between the Navajo language and the English language. Because the Navajo language either does not mark or marks differently various language structures, Weaver predicted the following difficulties in English:

1. Distinction of number.
2. Expression of possession.
3. Application of adjective to noun.
4. Distinction of gender.
5. Usage of subject and object.
6. Usage of definite and indefinite articles.
7. Usage of definite and indefinite pronouns.
8. Usage of correct verb inflections.
9. Usage of negative questions. (p. 213)

Weaver suggested that such information should be used to develop special materials for English as a Second Language (ESL) instruction.

Young (1973) examined the comprehension of semantic categories (quantity comparisons, specifically) in Spanish-English and Navajo-English bilingual children. He compared their performance on the comprehension tasks to that of English monolingual children. Young found that some of the semantic categories could not be directly translated into Navajo. These same categories were notably more difficult for the Navajo dominant children than other categories when tested in English.

Snider, Potter, and Kennedy (1983) studied differences in language comprehension between Indian and Anglo children from the same school. They found the Indian children scored

significantly below the Anglo children on the Test of Auditory Comprehension of Language (Carrow, 1973) and the Boehm Test of Basic Concepts (Boehm, 1971) with greater cultural group differences in kindergarten than in second grade.

Incidence and Prevalence of Communication Disorders

Stewart (1983) discussed communication disorders in the American Indian population. He said appropriate prevalence data were not available because of the lack of appropriate means of assessment. Even so, he cited a study conducted in Oklahoma by Clark and Downing in 1978 which found much higher percentages of speech/language deficits in American Indians than in the national average. They screened children four years old to eight years old and found 13.6% with deficits in receptive language, 19.2% with deficits in expressive language, 19.3% with disordered or delayed articulation, 7.4% with voice deviations, and 11.4% who failed a hearing screening. They reported the national average of all speech and language deficits to total 8%.

According to Toubbeh (1982),

The incidence of communication disorders in these populations [Native American],...is presently estimated to be between five to fifteen times higher than it is in the general population. Amelioration of these and other disorders is further complicated by cultural and linguistic factors, lack of indigenous manpower and inefficient intervention strategies....More than 74% of those needing these services [hearing, speech, and language services] today are not receiving them....The absence of culturally sensitive speech and language diagnostic tools continues to impede progress toward the

provision of appropriate services to handicapped Native Americans. (p. 396)

Provision of Speech-Language Services

Harris (1985) surveyed speech-language pathologists serving Native American Indian children to identify current assessment practices. The data indicated that of the 50 speech-language pathologists included in this report, none were Native American and none spoke the tribal language. Seventy-nine percent of the clients received services on reservations and "the majority reported speaking both their tribal language and English" (p. 1). Thirty-four percent of the speech-language pathologists said they do not assess skills in the child's tribal language. This would be considered only a partial assessment by Mattes and Omark (1984) who stated a language disorder would manifest itself in both languages. Further, PL 94-142 directed that "testing must be in the child's native language or mode of communication" (Mowder, 1982, pp. 11-12). Therefore, the speech-language pathologist is responsible for determining and assessing the client's dominant language and/or preferred language (Mattes & Omark, 1984; Mowder, 1982; Oakland, 1977).

In an Asha (American Speech-Language-Hearing Association) interview (1982), Harris discussed difficulties in assessing the speech-language skills of Native American children. Aside from the fact that the groups of Native American children are not homogenous groups, there are cultural factors which

presently seem to interfere with adequate delivery of special services. The Native American view of "handicapped" children is often either that they are "special" children or children whose spirit is out of "harmony with the life around them" (p. 389). Also, Native American children may tend to be less verbal than Anglo children and learn more frequently through observation, not questioning. Harris suggested using local norms on existing appropriate tests and obtaining the assistance of a native speaker of the child's dominant language when necessary. She also presented the following rules for working with Native American children:

1. Don't expect the Indian child to name pictures. The child knows you know the names of the pictures.
2. Don't ask personal questions. Indians may consider this prying.
3. Don't expect the Indian child to maintain long eye contact. A bowed head is a sign of respect.
4. Don't gush over babies. Indians feel that may endanger the child.
5. Don't think it's a sign of inattention if the same question is asked several times. Indians grow up with a lack of confidence in the word of the white person. (p. 389)

Standardized Testing

Given the earlier discussion of standardized tests and Native Americans, it would not be surprising to find that Native American children, as a group, score differently than the typical standardization sample. Even so, Harris (1985) found that the speech-language pathologists serving Native American children frequently used standardized tests (with

their standardized procedures and norms). Eight percent of the speech-language pathologists actually developed local norms while some others (about 1/3) estimated local norms. Although the respondents described the PPVT-R as culturally biased, it was reported to be the most frequently used standardized test with these Native American children.

Peabody Picture Vocabulary Test-Revised

The Peabody Picture Vocabulary Test-Revised (PPVT-R) by Dunn and Dunn (1981) was designed to serve as a norm-referenced test of receptive vocabulary. (See Appendix A for details of the test standardization, validity, and reliability.) Differential performance by race has been demonstrated on the PPVT-R. Bracken and McCallum (1981, cited in Bracken, Prasse, and McCallum, 1984) found that Blacks scored nearly one full standard deviation below Anglos on the PPVT-R. In another study (Bracken and Prasse, 1982), children from three different ethnic groups were matched according to IQ. Still, the PPVT-R discriminated between the three ethnic groups. Other studies have clearly shown the performance of Native American children on the PPVT-R is poorer than that of the standardization sample and other non-Indian groups (Connelly, 1985; Scruggs, Mastropieri, & Argulewicz, 1983; Spiegel, 1986). It should be noted that these studies did not, for the most part, attempt to control for other variables which may affect performance on the PPVT-R such as socioeconomic status.

Socioeconomic status may also be correlated with performance level on the PPVT-R. Ervin-Tripp (1973) described research which found that middle-class children tended to elaborate verbally, providing information which would obviously be known by the listener. This boded well for later test taking. Lower-class children were less verbal. Chinn (1982) stated, "Differences in cultures are apt to be more striking among lower-class members of an ethnic group, because they tend to be less assimilated than those who are middle-class" (p. 34). Laosa (1977) stated,

Probably the most important finding... was that each ethnic group studied evidenced a different pattern of mental abilities (for example, certain groups were relatively stronger in vocabulary development, while others were better in spatial reasoning ability, etc.), while social class status affected the level of scores across the mental ability scales (that is, in all ethnic groups studied, on all the abilities measured, middle-class children were superior to lower-class children. (p. 13)

Rationale and Research Questions

There are a variety of reasons to examine the use of the PPVT-R with the various Native American groups. Aside from the questions of test validity, reliability, and purpose, one must carefully examine the appropriateness of the published norms. Native American children do or may differ from their age peers of the normative sample in terms of dominant language, preferred language, cognitive or learning style, education, test taking experience, cultural or ethnic background, majority culture assimilation, school attendance,

and socioeconomic status. These factors may affect test performance on the PPVT-R. If Native American Indian children do, in fact, perform differently on the PPVT-R than the standardization sample, the establishment of local norms may be necessary. The possibility for local variation should also be examined in terms of ethnicity and grade level. Further, when samples are selected from different cities or schools, the data should be analyzed to determine if the samples represent the same "local" population. This study attempted to examine the need for local norms on the PPVT-R in Arlee and Ronan, Montana, by addressing the following research questions.

1. Does the mean standard score of randomly selected 6 year old, 10 year old, and 13 year old children from the Flathead Reservation in Arlee and Ronan, Montana, differ significantly from the published test norms on the PPVT-R?
2. Do the published norms and sample-specific means and standard deviations produce significantly different failure rates for the sample group, given a definition of failure as any score which falls below -2 standard deviations below the mean?
3. Do the Native American Indian children of Arlee and Ronan, Montana, perform significantly differently from the Non-Indian children of Arlee and Ronan, Montana, on the PPVT-R?

4. Is the performance of older children from Arlee and Ronan, Montana, on the PPVT-R more similar to the national normative performance than is the performance of the younger children from the same schools?
5. Does the performance of the children from Arlee, Montana, on the PPVT-R differ significantly from the performance of the children from Ronan, Montana, on the same test?
6. Does the performance of the children from Arlee and Ronan, Montana, on individual test items of the PPVT-R indicate an item bias defined as a significant departure from a line of best fit?

CHAPTER II

Methods

Subjects

One hundred five subjects were to be selected for the present research from the 6 year olds (6;0 to 6;11), 10 year olds (10;0 to 10;11), and 13 year olds (13;0 to 13;11) attending regular classrooms in schools on the Flathead Reservation, in Arlee and Ronan, Montana. Parental permission was requested for those children in grades 1, 4, and 8. Permission slips (see Appendix B) were sent home with the students. Follow-up phone calls were planned (when possible) in cases where no slip was returned within a week. These potential subjects were divided into groups of Native American Indian and Other within each age group according to the definition used to qualify for Title IV program benefits. (A person must prove 1/32 Indian ancestry to qualify [K. Carlson, Speech-Language Pathologist, personal communication, April 28, 1988].) Potential subjects were to be numbered and a table of random numbers utilized to select 25 Native American Indians and 10 Others from each of the three age groups.

Additional data gathered on each of the 105 subjects to accurately define the subjects selected and to allow for possible post hoc analysis was to have included the following:

1. % Native American blood
2. eligibility for free or reduced lunch program as an indication of socioeconomic status

3. receipt of special educational services including speech/language therapy, resource room placement, etc.
4. presence of a hearing loss or visual impairment
5. language scores from the Iowa Test of Basic Skills administered in the Spring, 1987
6. school attendance
7. language dominance and preference at home and school
8. Native American Indian cultural involvement
9. self-identification as Indian or Non-Indian

Information related to characteristics 1 through 6 was to be provided by school personnel. Characteristics 7, 8, and 9 were to be investigated through the use of routine interview questions asked before the administration of the PPVT-R (see Appendix C). These questions were to be asked of all subjects--Native American Indian and Other. These data were desired to describe the subject pool in a way often neglected in other research. These data would have later been used to determine the representativeness of the subject pool obtained, to conduct post hoc analyses, and to provide a solid base for future research.

If a child was unable or refused to complete the tasks requested in interviewing and testing, he/she was to be eliminated from the study. An alternate subject would then have been selected. Possible reasons for an inability to complete the tasks included the following: inability to indicate a choice on the PPVT-R either by pointing or speaking, inability to adequately see the pictures, inability to adequately hear the questions and test stimuli, or

inability to respond appropriately to the training items (lack of cooperation).

Examiners

The PPVT-R was to be administered by a white female graduate student in the Department of Communication Sciences and Disorders from the University of Montana. She had met requirements for the Asha Certification of Clinical Competence in Speech-Language Pathology short of a Clinical Fellowship Year. The examiner spoke Standard American English and was relatively unfamiliar with Native American Indian languages and culture. An Asha certified speechlanguage pathologist working in the Arlee schools planned to co-score during the administration of the PPVT-R to determine inter-examiner reliability.

Procedure

The PPVT-R was to be administered to each of the subjects according to the directions specified in the published manual. A study conducted by Choong and McMahon (1983) found the PPVT-R Form L resulted in age equivalents closer to the subjects' chronological ages than Form M. Therefore, Form L was to be used with all subjects in this study. Instructions to the subject were to be read verbatim from the manual. Prior to the testing, a routine introduction and interview questions were planned (see Appendix C). The youngest children (six year olds) were to be tested first so that modifications in the interview questions might be similar throughout the study.

For example, if the young children had difficulty answering questions about how often they participate in cultural activities, the researcher might choose to give all the children a multiple choice to answer those questions rather than leaving it open-ended.

Two subjects were to be randomly selected from each of the three age groups for inter-examiner reliability evaluation. The co-scorer was to sit behind both the examiner and the subject while observing and scoring the subject's responses.

Measurement and Data Analysis

In an attempt to answer and examine the answers to the research questions below, a variety of analyses were to be conducted.

Research Question 1

Does the mean standard score of randomly selected 6 year old, 10 year old, and 13 year old children from the Flathead Reservation in Arlee and Ronan, Montana, differ significantly from the published test norms on the PPVT-R?

1. Standard scores are calculated for all the children according to the published test manual. These scores are averaged to obtain the mean standard score of these children.
2. Statistical comparison of the mean standard score of these children to the published mean (100) is made through the use of a t test.

Research Question 2

Do the published norms and sample specific means and standard deviations produce significantly different failure rates for the sample group, given a definition of failure as any score which falls below -2 standard deviations below the mean?

3. Raw score means and standard deviations are calculated for the children in each age group.
4. Using -2 standard deviations as a cut-off point for failure on the PPVT-R, failure rates of the children are calculated using both the published norms and the distributions found in analysis 3 above. Statistical significance of any differences in failure rates is examined through a binomial proportions comparison test.

Research Question 3

Do the Native American Indian children of Arlee and Ronan, Montana, perform significantly differently from the Non-Indian children of Arlee and Ronan, Montana, on the PPVT-R?

5. Standard scores calculated according to the test manual are averaged for the Native American group and for the Other group. These mean standard scores are compared through the use of a t test.

Research Question 4

Is the performance of older children from Arlee and Ronan, Montana, on the PPVT-R more similar to the national normative performance than is the performance of the younger children from the same schools?

6. Standard scores calculated according to the test manual are averaged for each age group. These mean standard

scores are each compared through the use of a t test to the expected mean of 100 and again to each other.

Research Question 5

Does the performance of the children from Arlee, Montana, on the PPVT-R differ significantly from the performance of the children from Ronan, Montana, on the same test?

7. Standard scores calculated according to the test manual are averaged for each school. These mean standard scores are compared to each other through the use of a t test.

Research Question 6

Does the performance of the children from Arlee and Ronan, Montana, on individual test items of the PPVT-R indicate an item bias defined as a significant departure from a line of best fit?

8. The proportions of Native American children within each age group and the Non-Indian children within each age group correctly responding to each item administered are calculated. These proportions are plotted such that the items ordered by difficulty as per the PPVT-R are noted along the x-axis and the proportions of children selecting the correct responses are noted along the y-axis. The trend of the line is examined and items which seem to reverse the trend are identified as potentially biased or improperly ordered items.

Reliability

An item by item percentage of agreement procedure is used to calculate inter-examiner reliability for subject responses.

These reliability scores are obtained from the six administrations of the PPVT-R observed by both the examiner and the co-scorer.

CHAPTER III

Results

The procedures described in Chapter II were followed to the point of collecting signed permission slips returned to the schools. Numerous difficulties had been encountered and at that point, the researcher and her thesis committee decided that the research should not be pursued further. The specific events leading to this decision and other obstacles encountered along the way are discussed in this chapter. The intent is to share information which might be useful to other individuals considering similar research projects.

Obstacles

Lack of Protocol

Although research had been conducted on reservations in Montana, there seemed to be no established or agreed upon protocol for obtaining the needed support and approval or permission. All the people consulted (including the thesis committee, the University of Montana Research Office, the school administrators, and a past researcher) seemed to agree that permission must be obtained from the parents of the students and from the individual students themselves. No one disputed the need to obtain the permission of school administrators given that the study was to be conducted in the schools. Yet, there were many opinions about who else should be or must be involved and how they should be involved.

Below are some of the "answers" given to this researcher in her attempt to discern the appropriate steps to take before beginning the study:

- 1) submit the proposal and gain approval from the Bureau of Indian Affairs' office of Indian Health Services (which are actually separate agencies),
- 2) gain approval only from the administrators of involved schools,
- 3) report to the Tribal Council,
- 4) allow schools to take responsibility for informing any other groups as deemed appropriate,
- 5) do not involve the Bureau of Indian Affairs, and
- 6) talk to friends of various people who may be helpful or knowledgeable because they work or have worked on the Flathead Reservation.

Numerous contacts were made and a route was chosen. During the prospectus meeting, the thesis committee agreed that this researcher should seek approval from the schools to conduct the study. At that time, the thesis committee believed that the courtesy of informing interested groups would be extended by the schools if that was, in fact, appropriate. This decision was later found to be a poor decision. Difficulties encountered because of this decision are discussed later in this chapter.

Accessibility to Individual Data

A point of negotiation with the schools concerned balancing the need for individual data against the desire to maintain confidentiality. As noted in the Methods chapter, data were to be collected on individual students. Some of these data (e.g., language background, cultural experiences, and self-identification as Native American or non-Indian) were to be collected by this researcher during contact with the child. Parental permission was sought to obtain these data. The remaining data (e.g., % Native American blood, eligibility for free or reduced lunch program, receipt of special educational services, note of auditory or visual impairment, language subtest scores from standardized tests administered by the schools to the student body, and school attendance) were to be provided by school personnel.

Originally, these last characteristics were going to be described only with group data from the school personnel because parental permission was not sought to obtain these data on individual students. Then, the following arrangement was made with the schools so that individual data might be provided and confidentiality maintained. After testing and interviewing the students, this researcher would summarize that data on individual data sheets (see Appendix D). These data sheets (with the test scores covered) would be carefully coded and the students' names removed by someone appointed by the school administrators. This code would not be available

to the researcher, but would be used by various school personnel to provide the remaining information on the individual students.

Although these data would be grouped by the researcher in order to describe the sample obtained and would not be reported for any individual student, the flexibility of having individual data was believed to be very important. Individually collected data would allow the researcher to describe the group accurately if one of the subjects had to be eliminated from the study for some reason. Further, the individual data might allow the researcher to conduct interesting post hoc analyses such as examining the influence of the definition of Native American on the answer to Research Question 3 (difference in PPVT-R test scores between Native American and non-Indian groups).

Institutional Review Board Approval

Within the framework of the University of Montana, this study had to be approved by the thesis committee and by the Institutional Review Board (IRB). Committee approval was obtained and a research proposal was submitted to the IRB. This proposal is reproduced in Appendix E for reference. Conditional approval was obtained from the IRB approximately four weeks after the proposal was submitted. The conditions of the approval were stated as follows:

- 1) the parental consent form should be placed on the back of the letter to the parents instead of appended to it as a separate page.

- 2) the information summary letter to the parents should acknowledge that the investigator will be retrieving information from the public schools regarding the child's hearing, vision, school attendance, etc.
- 3) a child consent form should be developed for the older children to sign.
- 4) the parents should be given a copy of the information summary they are asked to read and sign to keep. (See Appendix F)

The letters/permission slips were produced back-to-back and distributed in duplicate as directed by the IRB. A child consent form was created for all students by adding a place for a signature to the forms used in interviewing the students (see Appendix C).

An appeal was made to the IRB regarding their second condition listed above. This researcher asked that this information not be added to the letter to the parents and suggested that it was not needed because of the arrangements made with the schools to obtain that information while maintaining confidentiality. There was no intent to withhold information from parents, but this researcher believed that the additional information in the letter would have discouraged many parents from giving permission because it suggested that the children could be injured in some way. Also, it would have been difficult to explain briefly and clearly to parents the importance of collecting that data. The IRB agreed to allow this omission from the letter to the parents on the condition that the research proposal be amended to explain that great care would be taken to maintain

confidentiality (see Appendix F for the IRB approval forms and Appendix G for the addition to the research proposal).

School Withdrawal

During the initial contacts with the school administrators in Arlee and Ronan, the potential effectiveness of the letter to the parents was discussed. Points discussed included the typical response rate for permission slips (expected to be between 30% and 50%), the length of the letter, the readability of the letter, and the legalistic paragraph included in the letter. This paragraph is reproduced below:

In the event that you are physically injured as a result of this research you should individually seek appropriate medical treatment. If the injury is caused by the negligence of the University or any of its employees you may be entitled to reimbursement or compensation pursuant to the Comprehensive State Insurance Plan established by the Department of Administration under the authority of M.C.A., Title 2, Chapter 9. In the event of a claim for such physical injury, further information may be obtained from University Legal Counsel. (Institutional Review Board, 1986)

This paragraph was viewed as self-defeating by some of the administrators. They believed that parents would find it threatening, intimidating, and difficult to understand. They suggested that the researcher delete it or reword it or reduce the print size. The IRB would not allow any alteration or the deletion of the paragraph. This eventually led to the decision of the Ronan schools to decline from participation

(see Appendix H for the letter notifying of their decision to decline).

The IRB indicated that the University of Montana Legal Counsel had written the paragraph and directed the IRB as to its use. They agreed to abide by any decision made by Legal Counsel regarding the use of the paragraph for this particular study when this researcher decided to make an appeal to Legal Counsel. The University Legal Counsel declared that the paragraph was not necessary for this study because it did not involve more than a minimal risk to the subjects. The researcher asked the Ronan administrators to reconsider their decision given the change in the letter to the parents. Ronan promptly agreed to participate (see Appendix I for Legal Counsel's memo and the letter to Ronan).

Tribal Education Committee Approval

The day after the letters to the parents were distributed at the schools, the chair of the Tribal Education Committee (TEC) phoned to express his concerns that neither the TEC nor the Indian Parent Advisory Groups at the schools had been involved with or informed of this research. (Please note that this researcher was not aware of the existence of the parent groups.) The chair of the TEC had a variety of questions related to the purpose of the study and the methods and materials to be employed. He extended an invitation to the researcher to attend a meeting of the TEC where she might

present the proposed research and address the concerns of the committee.

This researcher and the thesis committee chair attended a meeting of the TEC. There was limited opportunity for a presentation as members of the TEC had numerous concerns to share. Some of their concerns, as understood by this researcher, are noted below:

--They wanted to know more about why the study was designed.

--They wanted to know why Native American children were targeted for examination in this study.

--They wanted details regarding the methods of the study, how the results would be used, and how and to whom the results would be disseminated.

--They wanted to know what questions were to be asked about language and cultural experiences and why. One TEC member believed the culture questions were totally inappropriate--that this information should not be shared with those people outside the Native American culture. Also, some members wondered whether the language questions would be correctly understood by the children.

--They discussed the generally poor school and test performance of Native American children in their schools.

--They discussed the problems of labeling and of the provision of special services unnecessarily.

--They discussed problems of past research and how the identity and privacy of Native Americans had not been adequately protected.

The TEC did not decide at this meeting to support or to not support the research. (One member flatly stated that he was opposed to the research.) Instead, the TEC decided to work with the researcher to learn more about the study and to later decide whether or not to support it. They acknowledged that this could be a lengthy process.

Contacts were made with school administrators, thesis committee members, TEC members, and individuals familiar with the politics on the Flathead Reservation. It became apparent that the researcher should have involved (in some way) either the TEC or the Indian Parent Advisory Groups from the beginning. It was also apparent that the study should not be pursued without the support of the TEC. As it turned out, 38% of the permission slips were returned and the majority of the responses were positive. Even so, pursuing the study without the support of the TEC would have done little to build relationships between the involved parties--the University of Montana, the public schools, and the TEC.

Shortly after the TEC meeting, the thesis committee met to discuss the events. The decision was made to withdraw from the proposed research and to redirect the efforts of this paper. The decision was a very difficult one, but the result may be a paper which can give guidance to future researchers.

CHAPTER IV

Discussion

The process of pursuing this research study on the Flathead Reservation has brought to the fore issues with which future researchers should be familiar. The remainder of this paper is devoted to the presentation of information about agencies related to education on the reservations, suggestions about involving those agencies in research, discussion of the general need for research with the Native American population, and a summary of issues the researcher should consider when conducting research similar to that proposed in this paper.

Education and Agencies on the Reservation

According to the U.S. Department of the Interior, Bureau of Indian Affairs (1986), there are approximately 300 reservations and 504 recognized tribes in the United States. Most of these tribes are organized and governed under an elected Tribal Council which represents the tribe to other governments. The authority of the Tribal Councils varies across tribes and over time as a function of variations in the policy of the U.S. towards the tribes. The U.S. federal government has been charged by various Indian tribes with violations of human rights. In their response to these accusations, the U.S. has stated that tribes are "sovereign" yet "dependent" nations (Ortiz, 1984). This situation of a dependent sovereignty along with the changing nature of the

relationship between the tribes and the U.S. Government has led to confusion and animosity regarding the locus of control or authority. This situation is not conducive to research.

Schools

The majority of Native American children attend public schools (68% to 80%) while 20% to 25% attend federal schools or those schools run by the Bureau of Indian Affairs (BIA). The remaining children attend various private or mission schools (Coffer, 1979; Smith and Walker, 1973; and U.S. Dept. of the Interior, 1974).

The public schools are organized under the state government and are independent of any tribal government although members of the tribes may work at the schools and serve on the school boards or parent committees. This state level organization ensures some level of continued support to these schools because the states are legally bound to provide education (Coffer, 1979).

The BIA operates about 166 schools and 15 dormitories (U.S. Dept. of the Interior, 1986). Additionally, "forty-five schools, funded by the BIA, are run, totally, by tribes under Indian self-determination contracts (P.L. 93-638)" (U.S. Dept. of the Interior, 1981, p. 23). The BIA schools are both boarding schools and day schools (U.S. Dept. of the Interior, 1974). Due to the nature of the agreements between the federal government and the various tribes, these BIA or federally supported schools could be closed at any time,

leaving the states with the complete responsibility of educating all students within its borders (Coffer, 1979).

Federal Funding and Native American Students

Federal money is available to support the education of Native American children in the various schools described above. Naturally, the BIA schools are federally funded, but public and private schools may also receive federal money for their Native American students. Coffer (1979) stated that the various funding programs were often poorly or inappropriately administered and monitored.

Coffer also described four major federally funded programs which are either exclusively for Native Americans or may benefit Native Americans along with others. These include the Johnson-O'Malley Act of 1934 (JOM), the Federally Impacted Areas Act of 1950, Title I of the Elementary and Secondary Education Act of 1965, and the Indian Education Act of 1972 (Title IV). The JOM funds and the Title IV funds are designated to be used exclusively to promote educational programs for Native Americans. The Impact Aid funds are incorporated into the general operating budget of the school and Title I funds are used to provide services for all children deemed educationally disadvantaged.

The JOM Act was initially established because of a lack of tax money to support the schools. (Property taxes are not levied on reservations or Indian trust lands.) Then, with the implementation of the Impact Aid program, the JOM money was

more carefully designated to be used for special programs for the Native American students instead of being absorbed into the general operating budget as are the Impact Aid funds (Smith and Walker, 1973). Eligibility for JOM requires that a student have 1/4 Indian ancestry and that his parents live on or near a reservation. The JOM funds may be utilized for a variety of special services ranging from providing cultural programs to hiring additional people to work with Native American children (Coffer, 1979). According to the U.S. Dept. of the Interior (1973),

All schools receiving Johnson-O'Malley assistance are required to have an Indian education committee which is involved in planning, developing, and monitoring the programs for which such funds are used. The committees are made up exclusively of parents of Indian children in the schools. (p. 47)

Eligibility for Impact Aid funds requires that a student's parents reside or work on federal (non-taxable) lands. Reservations were included in this category in 1960. This money becomes part of the general operating budget--used in lieu of tax money (Smith and Walker, 1973).

The Title I program serves educationally deprived children which may include Native American children. A requirement of this program is that a group of parents be gathered to assist in directing this program. The majority of this group must be composed of parents of educationally deprived children (Coffer, 1979).

The Title IV program led to the establishment of the Office of Indian Education in the Office of Education and the provision of new educational programs. For schools to obtain Title IV funds, they must consult with and gain approval from a committee in which more than half are Indian parents (Coffer, 1979). A child must prove 1/32 Indian ancestry in order to be eligible for Title IV program benefits (K. Carlson, Speech-Language Pathologist, personal communication, April 28, 1988).

The fact that much money is provided to schools enrolling Native American children because they enroll these children has created a unique situation. These children have become financially valuable to the schools while the input of Native American adults has, historically, been ignored or not sought. Requirements of some of the funding programs seek to change that. The input and approval of Native American adults not employed by the schools are mandated by some of these federal programs. But, their role is not carefully defined. Therefore, the Native American parent groups must take shape through some trial and error over time. As these groups attempt to assert their power and develop their goals, they may choose to involve themselves in research projects not related to any of their previously developed goals. On the Flathead Reservation, either the Tribal Education Committee or the local Indian Parent Advisory Group may serve as the consulting group for these federal programs. The decision as

to which group should be advising seems to depend upon the size of the area that will benefit from the funding (L. LaCount, personal communication, May 11, 1988). A discussion about how these groups might best be involved in research conducted by others may be found below.

Partial Listing of Agencies on the Reservations

Below is a description of some of the agencies which may have some involvement in the schools or education on the Flathead Reservation. Researchers should be aware of the existence of these groups and make every attempt to involve or inform them appropriately.

Public schools. Within the public schools, the direction of authority generally goes from parents who elect a school board to the superintendent to the principal to the teacher. The superintendent, along with the principals, has the authority to allow research in the schools. Of course, the individual children can not participate unless they and their parents give their informed consent.

Bureau of Indian Affairs. The BIA is a federal agency in the Department of the Interior. Approximately 80% of the employees of the BIA in 1986 were Native American as a policy of preferential hiring was instituted (U.S. Dept. of the Interior, 1986). The Indian Self-Determination and Education Assistance Act of 1975, P.L. 93-638, has led to the contracting of many BIA services to local tribal organizations (U.S. Dept. of the Interior, 1981). The BIA houses an Office

of Education whose primary goal is "to provide the administrative services and technical assistance" that the tribes need to provide appropriate education (U.S. Dept. of the Interior, 1973, p. 3).

Indian Health Service. The program of Indian Health Service (IHS) provides "the primary federal health resource for American Indians and Alaskan Natives" (U.S. Dept. of the Interior, 1986, p. 8). This program is frequently considered part of the BIA, but it is not. The IHS had been in the Department of the Interior BIA until 1957. At that time it was placed in the Department of Health and Human Services. This re-organization was not complete as the IHS continues to be funded through the Department of the Interior. Additionally, the IHS contracts for some services with the local tribes' Tribal Health Departments. This contracting involves funding and expertise when necessary. Therefore, an IHS employee may actually work for the Tribal Health Department (C. Lewis, IHS, personal communication, April 27, 1988).

Charles Lewis (personal communication, April 27, 1988) explained that the IHS is involved in research on the reservations. They have a research approval committee which ensures that appropriate tribal approvals have been obtained. Any research conducted through or with the IHS must be proposed to this committee. The benefits of working with the IHS include the fact that they tend to be cognizant of

current policies, politics, and feelings on the various reservations. Additionally, they have "a good track record" of allowing the tribes to protect their interests, at times giving them veto authority over articles intended for publication. However, involving the IHS might necessitate adjusting or adding to the research questions to meet their needs, making the arrangement beneficial to them.

Tribal Council. As described earlier in this paper, the Tribal Council is the governing body on the reservation. The members of the Tribal Council are elected and they are directed by a Tribal Chairman. At the time this study was attempted, no one on the Flathead Reservation suggested that the research proposal be presented to the Tribal Council. On other reservations or at other times, this may not have been the case.

Tribal Health Department. The Tribal Health Department is under local tribal control. They provide a variety of services, including the provision of speech-language services. At times, they enter into a contract with the IHS to provide services normally provided by IHS. For these services, the Tribal Health Department receives funds and, at times, personnel from IHS.

Tribal Education Committee. On the Flathead Reservation, there exists a Tribal Education Committee (TEC). According to Clayton Matt, TEC Chairman (personal communication, April 15, 1988), the TEC is appointed by the Tribal Council. The

TEC became involved in this attempted study as described in Chapter 3. During the April 15 conversation, Mr. Matt indicated that the TEC would be drafting a letter to the schools in Ronan and Arlee, encouraging them to inform the local Indian Parent Advisory Groups of future research involving Native American children.

Indian Parent Advisory Groups. At the various schools on the Flathead Reservation there are Indian Parent Advisory Groups. These groups tend to be small, but potentially influential. The TEC currently recommends that research involving Native American children in the schools should also involve or at least inform these parent groups.

Tribal colleges. Tribally run colleges have been or are being established on reservations and these institutions could provide invaluable resources to the researcher on the outside. On the Flathead Reservation, the Salish-Kootenai College has been established. Douglas Morigeau, Dean of Students and member of the TEC (personal communication, March 21, 1988), suggested that the local parent groups be involved and that future research be done "in cooperation with" the Salish-Kootenai College. When asked who should be contacted at the college, Mr. Morigeau indicated that he could serve as an initial contact.

Department of Native American Studies. Within the University of Montana there is the Department of Native American Studies. This department offers an undergraduate

degree and offers course work for interdisciplinary graduate degrees. Faculty members have engaged in research on various reservations and could provide assistance to other researchers, particularly in terms of initial contacts to be made on the reservations.

Additional Sources of Information

Typical sources of information are those found in a library. Additional information may be obtained by the researcher from various other sources including the public information available from schools, tribes, and the BIA or IHS; data collected to support needs for services in grant proposals; data collected by the Salish-Kootenai College or the University of Montana's Department of Native American Studies; and data and perspectives of local professionals.

A Better Approach to Research

Hindsight is a remarkable thing, but in the case of this attempted study its value is diminished by the continually changing nature of the situation. The roles and interactions of the various agencies described above are not stabilized enough for any protocol to be finally established. Even so, this researcher provides below her perspective (along with some suggestions of others) on how to approach research similar to that attempted on a reservation.

As the research questions become fairly well formulated, a thesis committee has been established, and the methods are being designed, contacts should be made. The researcher

should contact the potential research sites, the Salish-Kootenai College (if on the Flathead Reservation), the Indian Health Service, the Indian Parent Advisory Groups, and the chairman of the Tribal Education Committee. The purpose of these contacts would be to present the research ideas and benefits and to discuss mutual interests and potential problems. Further, these contacts should lead to the design of a most appropriate and acceptable research method.

As the study takes shape, the above contacts may become more involved depending on mutual needs and interests. The University of Montana Department of Native American Studies may also be valuable in planning and implementing the study. Also, Charles Lewis of the IHS (personal communication, April 27, 1988) stressed the need to involve a tribal member from the beginning. Then, if the research proposal must be presented to a tribal group, the informed tribal member can act as an insider advocate. Students pursuing similar research projects should consider involving a TEC member or other "insider" on the thesis committee.

Need for Research with Native Americans

The speech-language pathologist working with Native Americans is faced with the difficulty of providing appropriate and effective services to a population whose speech and language skills and development are not fully understood. This alone constitutes a need for research.

Ideally, the speech-language pathologist would like to know the characteristics of the English dialect spoken by a group of adult Native Americans, how English develops in Native American children, what assessment protocols are most valid and reliable for Native Americans, and what treatment procedures may be most effective. Prior to addressing these types of research needs, the researcher may need to investigate some related areas such as past abuses of researchers, research needs perceived by the local population, and research areas the local population believes should not be probed. Additionally, one might investigate the formal or informal protocols used in pursuing research in schools on other reservations or through other agencies on reservations. The researcher must not be intimidated by the enormity of the task. He should, instead, recognize the value of carefully conducted "small" studies and the cumulative nature of research.

Summary of Possible Difficulties

For easy reference for future researchers, a discussion of difficulties which may be encountered when doing research in schools on reservations is provided below.

The first problem is the lack of an established protocol for pursuing research on reservations in Montana. This is not the result of there having been no research conducted on the reservations before, but seems to be the result of a history of abuses by researchers (especially of not sharing or

misinterpreting the results) and the changing nature of relationships between the concerned agencies and people.

When doing research in schools, there are numerous issues of which the researcher should be aware. First of all, children given permission slips may not even get those slips home. Younger children seem to be better at returning slips. Older children are more likely to forget or to decide for themselves that they do not want to participate in the study. Secondly, follow-up on slips not returned may be difficult. Sending a second slip could produce the same results as the first. Phone calls may be impossible in areas where families may not have phones. Home visits may be too costly and discouraged by the schools. Possible solutions which have come to light during this study include the following: mail the letter to the parents with an enclosed return envelope, stamped and addressed; involve school personnel who regularly make home visits in obtaining parental permission; involve students from the tribal college who may make home visits as a part of a class project; or involve bus drivers who deliver the children to and from school. (The first three possibilities were ideas of school administrators. The fourth possibility was the procedure used by Spiegel [1986] to obtain parental permission for a study very similar to that proposed in this paper.)

The third issue to consider when conducting research in schools is obtaining school endorsement. The endorsement of

the participating schools is needed and should be communicated in some way to the parents who are asked to give permission. This may involve a cover letter from the schools; signatures of school administrators on the letters to the parents; or, as in this case, simply mentioning the administrators as a resource in the letter to the parents. Schools may hesitate to endorse a research proposal if the information given to the parents might be perceived as intimidating or difficult to understand. This may be problematic given the legal paragraph currently required by federal law for studies involving "at risk" subjects.

The requirement to include the legalistic paragraph on consent forms can be detrimental to the study. The administrators involved in this project believed that the paragraph would not be easily understood by parents and, therefore, fewer parents would give their consent. Also, the use of this paragraph in a letter to parents led to the decision of one site to not participate in this study.

Finally, schools have data which may be very useful to researchers in answering their questions or simply in describing the sample selected. The schools can relatively easily provide these data on groups. To obtain data from the schools' records on individual subjects, the researcher must either get parental permission or work with the schools to get the individual data without the researcher knowing the identity of the individual subjects.

When attempting to conduct research in schools on a reservation, the level of cooperation between the schools and the tribe may affect the implementation of the study. On the Flathead Reservation there were indications that the relationship between the schools and the tribe was not yet optimal. The schools did not consider it necessary to inform the tribe about research to be conducted in the schools. The tribe considered it offensive that they were not informed from the beginning. On the other hand, the TEC questioned whether the results of the study had to be shared with the schools. Perhaps as these differences in opinion come to light, the two groups can make agreements which will be most beneficial to the children.

When attempting to study characteristics of a particularly vulnerable group, such as Natives Americans, the researcher should do his or her best to understand the history of this group's involvement with research and education so that past offenses are not repeated.

Additionally, the researcher should try to be aware of cultural factors which may affect the results or the implementation of the study. For example, some individuals on the Flathead Reservation were very concerned about the researcher asking questions about cultural activities and language exposure. They seemed to believe that those questions pertaining to religious activities probed into an individual's private affairs and were therefore inappropriate.

They also seemed concerned that information about language and culture should, at this time, be shared very cautiously so that researchers could not misinterpret the data in a way that would set back the Native Americans' own cultural awareness and the "re-birth" of their native language. One way to deal with this would be to involve the TEC or the Indian Parent Advisory Group in developing an acceptable questionnaire or asking a member to serve on a thesis committee.

An additional cultural factor which should be considered is that of data collection. Different cultures may have different views on what data should be collected and how it should be collected. The researcher who belongs to a culture different from that which he desires to study should be aware of the impositions of his values for research onto the subjects. For example, a more milieubased, longitudinal, and observational style may be the type of research intervention endorsed by a culture, in contrast to a decontextualized, analytical, brief sampling procedure of some statistical studies. Likewise, an inordinate concern with consent and legal provisions may send a mixed cultural signal. What may be the researcher's obligation to seek protection from legal damages, may be viewed as a statement of mistrust in the subjects. To avoid possible conflicts due to these differences, the researcher should involve people within the culture to be studied in the design and implementation of the study.

When attempting to study characteristics of Native Americans, the researcher is confronted with the problem of determining just who is Native American. Most studies do not provide their definition of Native American. They might use self-identification, the Title IV definition, The JOM definition, or tribal enrollment criteria. There seems to be little known about how the definition of Native American may affect results of studies. Perhaps this question alone is worthy of research.

Aside from the definitions of Native American, the researcher and the consumer of the research must consider and recognize the innumerable differences which may exist between the groups of "Native Americans". Tribes are distinct groups and although they share some historical impositions, other similarities should not be assumed.

When attempting to conduct research anywhere, the researcher must be aware of federal regulations designed to protect human subjects. One such requirement resulted in the legalistic paragraph designed by the University of Montana Legal Counsel to be included in consent forms. This paragraph is to be included when the subjects are considered an "at risk" group. The interpretation of "at risk" may vary somewhat as was apparent in this study. If the paragraph is used, the researcher must consider the effect it may have on the representativeness of the sample obtained.

When attempting to conduct research within the constraints of the University system, the researcher must know that additional time may be required beyond that projected. The research proposal must be approved by a thesis committee if it is student research. Then it must be approved by the Institutional Review Board. While a ten day turn-around is customary, the response of the IRB may be slowed by changes within the committee, alterations in schedules with quarter changes, and the routing of the paper work describing the IRB's decisions.

As the researcher concludes the study, great care should be taken to share the results with all of those groups or individuals who are interested or may find the information useful including the schools and the Tribal Education Committee or some similar group. The researcher may even want to involve someone from the population studied in interpreting the results and discussing the implications. If results are openly shared and criticisms of the study invited, further research may be more welcomed and productive.

Implications

The decision to discontinue the study was the outcome of the several problems described earlier in this paper. The researcher and her thesis committee believed that to pursue the study would not have served to promote good working relationships between the Tribe, the public schools, and the University of Montana. This route should not be considered

acceptable in the future. There is a definite need for research with groups such as Native Americans. Research can be most useful in areas such as education and the provision of special services. Without research, problems which are currently identified (such as educational difficulties of Native Americans) will likely continue.

A workable relationship must be established between the tribes, the schools, and researchers. Perhaps the difficulties could be addressed in new ways. Tribals members might identify needed research and contact the University for assistance in conducting the studies. Researchers from outside the culture to be studied might commit themselves to spend time establishing trust prior to beginning the actual study. An internship might be established by the University and the Tribe whereby University students would bring their expertise to the Reservation and learn how to employ their skills in that setting. Also, the Tribe and the University might train more individuals within the Native American culture to conduct research or to assist in obtaining research data.

Steps must be taken to promote the necessary research with Native Americans. Without answers to some basic research questions, Native Americans may continue to suffer from biases inherent in much of the testing and teaching that occurs in the schools of today. Through cooperative efforts, these problems can be most appropriately addressed. The current situation is not acceptable.

APPENDIX A

Peabody Picture Vocabulary Test-Revised

The Peabody Picture Vocabulary Test-Revised (PPVT-R, Dunn & Dunn, 1981) is a norm-referenced test of receptive vocabulary. It consists of 5 training items and 175 test items on which the examinee is asked to indicate which picture in a set of four represents the test word presented by the examiner. The authors recommended that this test be utilized as a part of a test battery and not as an all-encompassing measure in and of itself.

Receptive vocabulary is often assessed as a component of a person's overall language skills. Other times it is assessed and considered to be an indicator of intelligence. The original version of the test used terms such as mental age and intelligence quotient in labeling the scores obtained. Even so, in the manual for the original test, Dunn stated:

In light of the growing body of literature on the many facets of intellect, one must concede that the PPVT is not providing a comprehensive measure of intellectual functioning. Instead, by means of a short, restricted sample of behavior, it attempts to provide a useful prediction of school success, especially in the areas which call more heavily on verbal intelligence. (Dunn, 1965, p. 33)

Bracken, Prasse, and McCallum (1984) reviewed studies on the PPVT-R and concluded that it "is not a measure of general cognitive ability" (p.59). They based this on the findings of low to moderate correlations of the PPVT-R scores with various I.Q. scores.

The PPVT-R was standardized on 5,028 subjects (4200 aged 2 1/2 through 18 years and 828 adults). The selection of children and youth for standardization was dictated by data obtained from the 1970 U.S. Census. Therefore, the sample was selected to create sample proportions similar to the population proportions in terms of geographic region representation, occupational representation, ethnic representation, and community size representation. Further, 100 females and 100 males were selected for each of 21 age groups--at six month intervals from 2 1/2 to 7 years and at one year intervals from age 7 through 18. Parental permission was obtained for over 20,000 children. From this group, "subjects were randomly selected, case by case, to match the predetermined quota established by age group in terms of sex, race, and parental occupation" (Dunn and Dunn, 1981, p. 38). Quotas for geographic region and community size were met when sites were selected, before parental permission was obtained. When all quotas were met, each child was administered one form (L or M) of the PPVT-R.

In the PPVT-R Manual (Dunn & Dunn, 1981), there was no indication of subject disqualification due to factors such as physical abnormalities, hearing or visual impairment, mental retardation, language or learning disabilities, or the like. The PPVT-R Technical Supplement (Robertson & Eisenberg, 1981) indicated that no children were selected from "self-contained classrooms for the mentally retarded" (p.18). Lloyd M. Dunn

(personal communication, November 2, 1987) explained that subjects were selected from the mainstream of education and that those children with various handicaps and mainstreamed in the schools had an equal chance to be selected as those without handicapping conditions. G. Robertson of American Guidance Service (personal communication, November 2, 1987) stated that the elimination of subjects due to auditory or visual impairments was left to the examiner's judgement.

The PPVT-R manual discussed the following types of validity: content, construct, predictive, and concurrent. Relative to content validity, the initial pool of items was selected from those words in Webster's New Collegiate Dictionary (G. & C. Merriam, 1953) which could be shown by a picture. Therefore, the PPVT-R is "assumed to meet adequate standards for a picture vocabulary test measuring hearing vocabulary in Standard English" (Dunn & Dunn, 1981, p. 59). Dunn and Dunn stated that construct validity for the above mentioned purpose was dependent upon its content validity. If, however, the PPVT-R was to be used to assess scholastic aptitude, one would have to establish construct validity separate from content validity. Finally, Dunn and Dunn stated that data on predictive and concurrent validity for the PPVT-R were not available with the exception of studies equating the original version of the PPVT with the PPVT-R. McCauley and Swisher (1984) reviewed the PPVT-R Manual and found it did not adequately document concurrent or predictive validity (two of

the ten basic characteristics of tests which they were looking for). Muma (1985) responded to the review of McCauley and Swisher by adding that, in his opinion, the PPVT-R is "notoriously weak in construct validity" (p. 291).

Reliability of the PPVT-R was addressed by Dunn and Dunn (1981) in terms of split-half reliability and retest reliability. They reported split-half reliability of .61 to .88 for the two forms of the test. Spiegel (1986) studied the psychometric properties of the PPVT-R with a group of children from a Sioux Reservation in South Dakota. She found split-half reliabilities of .76 to .93, slightly higher than those found by Dunn and Dunn.

Dunn and Dunn (1981) reported immediate retest reliabilities of .71 to .89. McCauley and Swisher (1984) stated the PPVT-R did not demonstrate adequate test-retest reliability. They had set a test-retest criterion of .90. It should be noted that the retest reliability scores reported by Dunn and Dunn were obtained by administering alternate forms of the test rather than by administering the same form of the test twice.

Scruggs, Mastropieri, and Argulewicz (1983) studied the delayed test-retest reliability of Form L of the PPVT-R for 56 children in a bilingual kindergarten. They found a delayed test-retest reliability score of .90 for the total sample.

The original version of this test, the PPVT, has been subjected to numerous studies and comparisons. The revised version has yet to withstand such careful and thorough scrutiny.

APPENDIX B

Parental Information Summary and Consent Form

Dear Parent(s):

A study is being conducted at your child's school by the University of Montana Department of Communication Sciences and Disorders. The study involves administering a listening vocabulary test (the Peabody Picture Vocabulary Test-Revised) to a number of children. This test is frequently used in schools throughout the country. The results of this study will be used to suggest what level of scores should be expected of children from this area. With this information, the schools will be better able to determine which children need help in this area.

We would like to include your child in this study. Each child will be asked to take the vocabulary test. The test involves pointing to pictures named by the tester. It takes 10-20 minutes. Each child will also be asked some questions about what languages he/she knows and the amount he/she participates in Native American Indian cultural activities. Each child's test score and responses to questions will be used for research purposes only. The results of the testing will be kept strictly confidential and each child's name and identifying remarks will be removed from all research files. Information on your own child's responses will be provided to you if you request that information. You have the right to withdraw your child from this study at any time without penalty.

Please complete the form on the back and return it to the school as soon as possible. The second copy is for you to keep. If you have any concerns or questions about this study, you may contact Randy Weirather or Lori Hanson at 243-4131 (Missoula number). Your Superintendent, _____ may also be able to answer some questions regarding this project. He can be reached at ____-____.

Sincerely:

Randy Weirather, Ph.D.
Dept. Communication Sciences and Disorders
University of Montana

Lori A. Hanson, B.S.
Dept. Communication Sciences and Disorders
University of Montana

CONSENT FORM

I have read the attached letter. If I consent, I understand that my child will be asked to take a vocabulary test and to answer questions about his/her language experience and participation in Native American cultural activities. I understand this information is for research purposes only. I understand that I may withdraw my child from this study at any time without penalty.

Check one:

 I will allow my child to participate in this study.

 I will not allow my child to participate.

Parent's Signature

Child's Name

If you allow your child to participate, the following information is needed for research purposes only.

Child's Birthdate: _____

Languages spoken at home: _____

APPENDIX C**Child Consent Form and Interview**

Hello, _____. My name is Miss Hanson. I am doing a study for the University of Montana. I want to find out what words you know and what words you do not know. This will help us to predict what words other children your age should understand. Your parent has agreed to allow you to participate in this study. I will ask you some questions and then I will give you a test. This test will not be graded and will not effect your school grades. Still, I want you to give me your best and most truthful answers. You are free to quit at any time if this makes you nervous or uncomfortable. If you quit, it will not effect the way you are treated in school in any way. This will take about 20 to 30 minutes. Do you agree to participate? _____ If so, I would like for you to sign your name below. First, I will ask you some questions about yourself so that I know more about you.

Signature

NAME: _____

Do you agree to participate? _____

When were you born? _____

What languages can you speak? _____

What languages can you understand? _____

Have you ever spoken other languages? _____

Which languages? _____

When did you speak _____? _____

What languages spoken at home? _____

By whom? _____

Which is used most often at home? _____

What language(s) do you use with your friends? _____

What do you use most with your friends? _____

What language did you speak first? _____

What language do you like to use most? _____

What language do you actually use most of the time? _____

Does your family attend Native American cultural activities
such as Pow-wows, Sundances, Sweats, Jump Dance, Native
American Church, or anything else? _____

Which events? _____ How often? _____

Do you attend any of these activities? _____

Which events? _____

How often? _____

Do you participate? _____

Are you Native American? _____

APPENDIX D
Individual Data Sheet

Subject Number:

Age:

Ethnicity: % N. A.:

Birthdate:

Test Date:

Class/Grade:

Lunch Eligibility:

Language Use:

Cultural Involvement:

School attendance:

Hearing: Describe loss.
Describe accommodations.

Vision: Describe impairment.
Describe accommodations.

Current Special Educational Services: (List.)

ITBS subtest scores:

PPVT-R Scores:

	<u>National</u>	<u>Local</u>
Raw Score--		
Standard Score--		
Standard Dev.--		
Percentile--		
Age Equivalent--		
Pass/Fail--		

School Collection Form

Subject Number:

Lunch eligibility:

School attendance:

Hearing: Describe loss.
Describe accommodations.

Vision: Describe impairment.
Describe accommodations.

Current Special Educational Services: (List.)

ITBS subtest scores:

APPENDIX E**Research Proposal**

Date: December 14, 1987

To: Arthur Beaman, Ph.D. Chair, Institutional Review Board

From: Randy Weirather, Ph.D. and Lori A. Hanson, B.S. Communication Sciences and Disorders

Subject: M.A. Thesis Proposal

1. Brief description of the research:

A norm-referenced listening vocabulary test (the Peabody Picture Vocabulary Test-Revised, PPVT-R) will be administered to a random sample of children from the Flathead Reservation in Arlee and Ronan, Montana. The distribution of scores obtained by this group will be compared to the published national norms. These comparisons will be made with respect to geographic/community location, age, and ethnicity to determine the need for local norms. The specific research questions to be addressed are listed below.

A. Does the mean standard score of randomly selected children from the Flathead Reservation in Arlee and Ronan, Montana differ significantly from the published test norms on the PPVT-R?

B. Do the published norms and sample specific means and standard deviations produce significantly different failure rates for the sample group, given a definition of failure as any score which falls below -2 standard deviations below the mean?

C. Do the Native American Indian children of Arlee and Ronan, Montana perform significantly differently from the Non-Indian children of Arlee and Ronan, Montana on the PPVT-R?

D. Is the performance of older children from Arlee and Ronan, Montana on the PPVT-R more similar to the national normative performance than is the performance of the younger children from the same schools?

E. Does the performance of the children from Arlee, Montana on the PPVT-R differ significantly from the performance of the children from Ronan, Montana on the

same test?

F. Does the performance of the children from Arlee and Ronan, Montana on individual test items of the PPVT-R indicate an item bias defined as a significant departure from a line of best fit?

2. Description of benefits of the research:

Assessment of communication skills is often accomplished through the use of norm-referenced tests. Then we might provide services to those who perform below some established level of "normal". Many definitions of normal speech-language behavior are based on the average performance of middle-class whites. While many will acknowledge that one such normative framework is not appropriate, we currently lack references for "normal" amongst diverse populations (diverse culturally, linguistically, economically, etc.).

The PPVT-R is a frequently used test. Harris (1985) surveyed speech-language pathologists serving Native American Indian children. They reported the PPVT-R was the most frequently used norm-referenced test with these children. Yet, they believed the test was culturally biased. Approximately half of the speech-language pathologists surveyed still used the published norms in interpreting the test scores of these children. This may lead to a bias in assessment because of differences between the standardization sample and the local sample being assessed. The differences may be noted in characteristics such as geographic location, socioeconomic status, education, test-taking experience, cognitive or learning style, language background, and communication style.

The appropriateness of using the published norms for the PPVT-R with diverse populations should be examined carefully at a local level. This would lead to more appropriate interpretations of the scores at the local level if the performance of the local group does, in fact, differ from the performance of the standardization group. In other words, students would not be penalized for belonging to a population different from the population the published test was standardized on. Additionally, this type of research would prepare the researcher to better deal with communication skills assessment with diverse populations following graduation.

3. Description of how subjects will be used:

The PPVT-R will be administered individually to the

subjects. This test involves selecting one of four pictures as the one named by the examiner. In addition to this, the subjects will be asked about the languages they speak and understand and about their involvement in cultural or tribal activities. Information related to other characteristics of the subjects (i.e. hearing, vision, receipt of special educational services, school attendance, blood quantum, performance on language subtests of the Iowa Test of Basic Skills, and S.E.S. indication) will be coded for confidentiality reasons and provided by school personnel.

4. Description of the subjects:

The subjects will be randomly selected from three age groups in Arlee and Ronan, Montana. Twenty-five children from each age group will be Native American Indian. Ten children from each age group will not be Native American Indian. Students whose motor, visual, or auditory skills preclude their completion of the tasks required for the PPVT-R will be excluded from the study.

5. Description of the risks and discomforts to which the subjects will be exposed:

Risks to individual subjects are presumably negligible. No deleterious effects are anticipated.

6. Description of the means to be taken to minimize such deleterious effect or violation:

Data collected on individuals will not be used for purposes other than the research described above. Any subject may withdraw from participation in the study at any time.

7. Description of the means by which the subjects' personal privacy is to be protected and confidentiality of information maintained:

Data on individuals will not be shared with anyone other than the parents, and then, only if requested. Subjects will be numbered so that the names will not be necessary on individual data sheets. Grouped data will be the emphasis of the written report.

8. Copy of the written consent form that is to be signed by the subjects' parent/guardian:

(See attached consent form.)

9. No waiver of written informed consent is desired.

APPENDIX F

IRB Approvals

Intra-campus MEMORANDUM

UNIVERSITY OF MONTANA

DATE: 2/3/88

TO: Lori A. Hanson, Communication Sciences and Disorders

FROM: University of Montana Institutional Review Board for Use of Human Subjects
in Research

As a result of ☐ administrative review or ☒ deliberations by the University
of Montana Institutional Review Board your proposed research project, _____

"Lori Hanson - M.A. Thesis Proposal"

☐ has been approved and is considered

☐ a "no risk" project not requiring the written informed consent of
the participants.

☐ To involve sufficient risk to require the written informed consent
of the participants as defined in the UM Policy Statement for the
Use of Human Subjects in Research as amended in the memorandum of
December 28, 1978, to your department.

☒ has been conditionally approved and the conditions imposed by the Board
are:

- 1) the parental consent form should be placed on the back of the letter to
the parents instead of appended to it as a separate page.
- 2) the information summary letter to the parents should acknowledge that the
investigator will be retrieving information from the public schools
regarding the child's hearing, vision, school attendance, etc.,
- 3) a child consent form should be developed for the older children to sign.
- 4) the parents should be given a copy of the information summary they are
asked to read and sign to keep.

☐ has not been approved in its present form. The Board suggests that you:

cc: Randy Weirather, Assoc. Professor, Communication Sciences and Disorders


Arthur L. Beaman, Chairman

NOTE: It is mandatory that you report immediately to the IRB:

1. Changes in procedures,
2. Unanticipated problems,
3. Adverse reactions of, or effects on, subjects.

Intra-campus MEMORANDUM

UNIVERSITY OF MONTANA

DATE: 2/16/88

TO: Lori A. Hanson, Communication Sciences and Disorders

FROM: University of Montana Institutional Review Board for Use of Human Subjects
in Research

As a result of ☒ administrative review or ☐ deliberations by the University
of Montana Institutional Review Board your proposed research project, _____

"Lori Hanson - M.A. Thesis Proposal"

☒ has been approved and is considered

Conditions Satisfied

☐ a "no risk" project not requiring the written informed consent of
the participants.

☐ To involve sufficient risk to require the written informed consent
of the participants as defined in the UM Policy Statement for the
Use of Human Subjects in Research as amended in the memorandum of
December 28, 1978, to your department.

☐ has been conditionally approved and the conditions imposed by the Board
are:

☐ has not been approved in its present form. The Board suggests that you:

cc: Randy Weirather, Assoc. Professor, Communication Sciences and Disorders


Arthur L. Beaman, Chairman

NOTE: It is mandatory that you report immediately to the IRB:

1. Changes in procedures,
2. Unanticipated problems,
3. Adverse reactions of, or effects on, subjects.

APPENDIX G

IRB Proposal Amendment

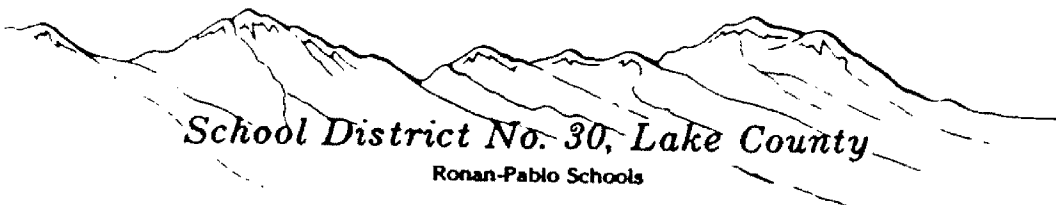
Item number three as found in Appendix E is reprinted below with the addition to the description underlined.

3. Description of how subjects will be used:

The PPVT-R will be administered individually to the subjects. This test involves selecting one of four pictures as the one named by the examiner. In addition to this, the subjects will be asked about the languages they speak and understand and about their involvement in cultural or tribal activities. Information related to other characteristics of the subjects (i.e. hearing, vision, receipt of special educational services, school attendance, blood quantum, performance on language subtests of the Iowa Test of Basic Skills, and S.E.S. indication) will be coded for confidentiality reasons and provided by school personnel. These data on individual subjects will not be available in identifiable strings to anyone other than those directly involved in the data collection. This researcher will take great care to avoid reporting any information which may lead to the identification of any particular subject by those who may read the report of the research. It is the intent of this research to report group trends only.

APPENDIX H

Letter of School Withdrawal



K. William Harvey Elementary Principal
 "Helping Every Child Achieve"

Drawer R
 Ronan, MT 59864-0580

(406) 676-4390

February 12, 1988

Laurie Hanson
 Department of Communication
 Sciences & Disorders
 U of M
 Missoula, Mt. 59812

Dear Laurie,

I want to write to you to explain why our district declined to work with you on your graduate study.

It is important for you to know that we were impressed with you and your professionalism, the thought that you put into your research design and the commitment that you displayed to do a relevant and accurate study.

However, after reviewing your proposal with you, we felt that it would be impossible for you to get a truly random sample of Native American subjects because of the permission form each subject's parents would be required to fill out. In fact, many of your most important subjects for your sample would be immediately ruled out by that form. It certainly is anything but "user friendly". We felt, from a parent point of view, that it would be quite intimidating, especially to those parents whose children you would need most in your sample.

In and of itself, this wouldn't be a major problem for us, even though we feel that your results could be skewed. The concern that we felt, after much discussion, was that that parent permission would be viewed as coming from our district, and that, because of its technical and intimidating wording, it could possibly alienate some of our families.

It is important for us to build relationships with all of our parents. We don't see how this form could do that in any way.

Again, I want to compliment you on your study. I am sorry that such legal measures are required to carry it out. Your intent is good; the method you are being required to use to get your sample certainly needs improvement.

Sincerely,

Terri O'Fallon, Principal

Equal Opportunity in Education and Employment

APPENDIX I

Legal Counsel Memo and Letter to Ronan

Intra-campus MEMORANDUM

UNIVERSITY OF MONTANA

DATE: February 17, 1988

TO: Mary Hardin, Assistant Professor, Communications &
Sciences Disorders

FROM: James T. Ranney, Legal Counsel *JTR*

RE: Compliance with Institutional Review Board Regulations

You have asked that I give you a very short memo on why one of your grad students, Lori Hansen, does not need to include a paragraph relating to medical treatment options nor right to sue the University.

Although it would be possible to abbreviate the warning (which was designed for cases where there is a likely risk) to say something to the effect that although there is little or no risk of injury associated with the project, participants are NOT WAIVING any right to sue the researchers or the University, my reading of the relevant regs indicates that nothing at all need be said.

The relevant reg is 21 CFR 50.25(a)(6), which basically requires an explanation on compensation and medical treatment availability only if the research involves "more than minimal risk." As I understand Ms. Hansen's proposal, this is not such a case. Therefore, there is no need for the warning statement.

February 18, 1988

532 South Third West
Missoula, Montana 59801

Bob Halgren, Superintendent
Ronan Schools
Ronan, Montana 59864

Dear Mr. Halgren,

Enclosed is a copy of the revised letter to parents and consent form. When I learned of your decision to not participate in this research project, you indicated that I may contact you again if I was able to negotiate a change in the parent letter. By pursuing legal routes, I have obtained permission to omit the legal paragraph which discussed injury and compensation. I do understand there are other concerns related to your participation in research. Even so, I believe we need to do our best to address questions in education and assessment. Please reconsider your decision about Ronan's participation in this study. I will phone you again on Tuesday, February 23 to learn of your decision. Thanks again for your time.

Sincerely,

Lori A. Hanson, B.S.

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