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ABSTRACT

In an effort to identify factors contributing to the poor achievement levels of American Indian students, a sample of juniors and seniors from the Albuquerque Indian School (AIS is a Bureau of Indian Affairs boarding school) were administered the following tests: Test of English as a Foreign Language (TOEFL); Iowa Test of Educational Development (ITED); Tennessee Self Concept Scale (only 8 of the 100 TSCS scores were used); and the Southwestern Indian Adolescent Self-Concept Scale (SIASS). Results were analyzed in terms of linguistic-tribal affiliation, grades, sex, and self concept. The sample consisted of: 32 male and 37 female Navajo Athabascan speakers; 6 male and 5 female Apache Athabascan speakers; 7 male and 3 female Keres and Towa speakers; 3 male and 3 female Tiwa and Tewa speakers; and 1 male and 2 female Zuni and Ute speakers. Indicating an interrelatedness between educational retardation, low self concept, and skill in the English language, the results showed lower than norm scores for all the tests used; tribal differences in favor of the Apache; sex differences in favor of the females' competence in the more technical aspects of English; grade differences in favor of the juniors (evidence of educational retardation); differences in self-concept test results, with the TSC indicating much lower self concept than the SIASS; and low scores on the ITED and TOEFL tests. It was concluded that any attempt to rectify this situation should consider language, culture, and self as inextricably interwoven. (JC)

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THE RELATIONSHIP OF A TEST OF ENGLISH AS A SECOND LANGUAGE TO MEASURES OF ACHIEVEMENT AND SELF-CONCEPT IN A SAMPLE OF AMERICAN INDIAN STUDENTS

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AT
AMERICAN PSYCHOLOGICAL ASSOCIATION CONVENTION
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By

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THE RELATIONSHIP OF A TEST OF ENGLISH AS A SECOND LANGUAGE TO MEASURES OF SAMPLE OF AMERICAN INDIAN STUDENTS

INTRODUCTION

This project is a follow-up of a study of the low achievement levels of samples of American Indian students, and the correlation of these low levels of achievement with a test of English as a second language (Scoon and Blanchard, 1970). In that study it was demonstrated that the Test of English as a Foreign Language (TOEFL) is a valid measure of English language skill among Indian students. The aforementioned study also indicated that the Iowa Test of Educational Development (ITED) is also a measure of language ability. Yet, the ITED is used by some federal Indian schools, among others, as the standard measure of achievement. As this indicates, any attempts to use tests such as the ITED to measure achievement with students who have learned English as a second language must address the problem of having the validity of the test scores confounded by a language factor. Also, ITED results quite strongly suggest that the test is too difficult, or perhaps inappropriate for Indian students of the sample studied because of the language handicap identified by the TOEFL scores. The study also indicated a personality factor which, however, could not be correlated with other measures. These findings are only a part of the major problems encountered by those of us who are involved in the education of American Indian children. Of even greater importance are the problems faced by the Indian students themselves as they attempt to secure an adequate education in an English speaking white middle class culture.

Other studies substantiate the achievement problem. Coombs (1958) found that Indians fell well below national norms on standardized tests, and that the educational retardation increased the higher the grade level. The Coleman study confirmed this finding, showing that the reading and verbal ability scores of twelfth grade Indian students have a mean more than three grade levels behind that of the metropolitan anglo student (Coleman 1966, p. 270).

Many southwest American Indians enter school as non-speakers of English. This is especially true of the Navajo (Spolsky, 1970). This fact is very important and some of its implications will be discussed later. The negative relationship between the use of the tribal language in the home and the frequency of continuing formal education beyond the high school has been pointed out by Bass (1969, p. 13). The dropout and failure rates of southwest Indian students is higher than that of the nation at large (Owens and Bass, 1969).

Poor English language ability is not the only handicap faced by Indian students. A number of other factors such as: (1) heightened mobility or "psychosocial nomadism," (2) shifting standards, and (3) superficiality of response or the "chameleon response" (T.P. Krush, et al, 1965) have been cited, among others.

Two other contributors to the problems faced by Indian students are a poor self-concept and a sense of lack of control over their environment during the cultural conflict experienced in the educative process. The Coleman report found that these two variables appeared to contribute more

to under-achievement than any others addressed in the study. (Coleman 1966, p. 319-24). A diminishing self-concept along with a decreasing sense of control coupled with, and partially resulting from, a requirement to perform all school work in English often results in severe retardation in general verbal ability and reading.

The relationship between reading problems and personality problems have been demonstrated in a number of studies. Park and Linden have shown that the best differentiating factor between poor and good readers is personal adjustment. Of special importance is their finding that (English language) "illiteracy and/or foreign language in the home . . . were characteristic of reading failures" (Park and Linden 1968, p. 326). The foreign language in the home factor agrees with the findings by Bass cited earlier (Bass 1969, p. 13).

Studies other than that of Coleman demonstrate the relationship between self-concept and achievement and in some cases their relationship to cultural differences (Walton, 1966; Dreyfuss, 1968; Hughes, 1967; Mitchell, 1967; Williams, 1967; Williams, 1968).

The ability of the Indian to assume his rightful role in Indian Affairs as well as his equal place in the larger society of the United States is largely a function of education in the formal dominant anglo culture sense. Some of us may not particularly like this fact, but it remains true nevertheless. In a modern technological society, college education is usually a must if one is to become a leader in almost any field. Yet

we are faced with the fact that Indian students are dropping out or being pushed out of high school at very high rates (Smith 1968, p. 11; Owens and Bass 1969). Indians are not entering college in sufficient numbers and the attrition rate is appalling (Smith, loc. cit.).

Formal education of the Indian is neither new, nor solely a desire of the anglo society. "Indian education predates the American revolution." (Bass 1969, p. 1). Many Indian leaders have expressed the need for their people to achieve (formal white culture) education. Perhaps one of the most notable examples is that made by Manuelito, a former great Navajo war leader to young Chee Dodge, later to become tribal chairman of the Navajos:

> My grandchild, the whites have many things which we Navajos need. But we cannot get them. It is as though the whites were in a grassy canyon and there they have wagons, plows, and plenty of food. We Navajos are upon the dry mesa. We can hear them talking, but we cannot get to them. My grandchild, education is the ladder. Tell our people to take it. (Underhill, Ruth, as quoted in Bass 1969).

The Navajos have and are attempting to comply with Manuelito's appeal, especially since World War II. The southwestern pueblo groups have also adopted this policy but only recently. It was not until 1963 that high school graduation for all pueblo Indians was stated formally as a desirable goal (United Pueblos Agency Memorandum, 1965). This is not to say, however, that such had not been sought by many prior to that time.

The level of educational achievement among the southwest Indian groups, Navajos, Pueblos, Apaches, and Utes has been disappointing. Failures

have been attributed to many causes. Since "Indian Education" has been, and still is the responsibility of the Bureau of Indian Affairs (BIA), the BIA has been blamed by many. The BIA boarding schools have been singled out for intense criticism, especially in recent years. While some of this criticism may be justified, suggestions, when they have been forthcoming, have been platitudinous in many cases and vague in their generality.

This study concerns itself with a sample of southwest Indians in a BIA boarding school, Albuquerque Indian School (AIS). It represents a further attempt at isolating and identifying those factors which are resulting in poor achievement by Indian students.

THE POPULATION SAMPLE

AIS is an off-reservation BIA boarding school. It has a current enrollment of approximately 650 students. Around 80% of these students are Navajo. The other 20% is made up of students from the Mescalero and Jicarilla Apache Tribes, some of the 19 Rio Grande Pueblos, and Utes. Approximately 50% (all Navajos) attend local Albuquerque public schools under the Navajo Nation Bordertown Program while boarding at AIS. The other 50% attend the AIS federal school. The sample in this study consists of the majority of the Juniors and Seniors of the Class of 1969 AIS federal school. The percentages of the tribal groups in this study are generally representative of the total school population.

THEORETICAL FOUNDATION

The general theoretical structure of this study is that school learning demands a skilled use of language, in this case English. Within this basic theoretical formulation it follows that Indians must use English since that is the language of the educational system, and since none of the southwest Indian languages is widely used in written form. It is the contention of this paper that second-language learning differs in critical ways from learning that takes place in the primary language, especially during school. Also, it is theorized that who one learns the second language from is very important. This importance has to do with factors other than educational achievement; factors such as self-concept and personality development in general.

As has been noted elsewhere (Scoon and Blanchard, 1970): "The language learned in childhood is the major means through which the growing mind orders its processes of cognition and affection. In the words of Edward Sapir:

> The fact of the matter is that the 'real world' is to a large extent unconsciously built upon the language habits of the group . . . We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation . . . No two languages are ever sufficiently similar to be considered as representing the same social reality (Sapir 1961, p. 69).

Learning a second language involves learning new sounds, grammatical-morphological patterns, word meanings, and a <u>new underlying world-view</u> or way of ordering data given by experience to consciousness."

Thus, the second language must somehow be added to, substituted for, or operate in some co-existent way with the first language. In many cases with our students, the second language is not learned concurrently with the primary language in the early, direct response to developing consciousness. Also, it is not learned from parents and/or other Significant Others. Rather, it is often learned from strange and possibly feared alien adults in an alien environment, the BIA or public school. Such a learning situation may contain transactions leading to failure. There is little doubt that schools are still very threatening to many Indian children (Styles of Learning 1968, p. 1).

Motivation to learn has been demonstrated to be the most important single determinant of success in the learning of a foreign language (Lambert and Gardener, 1959; Gardener, 1960; 1968; Anisfeld and Lambert, 1961; Carrol, 1962; Lambert, et al 1960, 1963). Among the motives for learning a second language (Scoon, 1970), "it appears that the most effective is the desire for integration into the society of speakers of the language . . . This integration is, of course, a form of acculturation." If such is the case then one is quite likely to see some confusion in today's Indian students; a confusion resulting from conflict in value systems with relevant detrimental impact on the learning of English as a second language.

This is not the only factor, of course. Second-language learning is also a function of the similarity of the two languages. Dissimilarities between English and Indian languages are very pronounced, especially languages such as Navajo. Whorf (1956, pp. 233-345) gives many examples.

Since one of the major Indian languages involved in this research is Navajo, the following quotation from Robert W. Young (1961) seems in order:

> "Although Navajo and English are markedly divergent phonologically, the difference is extreme in terms of their morphological and structural features. Such divergence . . . is mentioned here because of the implications such differences have for the Navajo learning English and for the teacher who presents English to Navajos as a foreign language."

Young goes on to say (p. 473):

> "Few teachers acquire the knowledge of Navajo language and culture necessary to permit them to analyze the problems confronted by Navajo beginners in the learning of English."

Considering the above: if an Indian student has conflicts in values relative to learning English as a symbol of acculturation, and if that Indian student is forced to learn English under conditions of threat (as is often the case with Navajo children) then one might hypothesize that the learning of English as a second language might lead to poor second-language acquisition with the subsequent educational retardation, and to personality development problems which might be evidenced by low measure of self-concept.

It is the purpose of this paper to determine if such is the case. While it is recognizably difficult to determine the effect of second-language acquisition on other developmental areas, it is this paper's contention that primary language and self-identity are inseparably connected and that any attempts at imposing a second language which includes degrading

the primary language (as has often happened with Indian languages) leads to an inhibition of positive self-image development that often results in a mis-identification of the problem by the Indian student with his race. In other words, to use the following as an example: "To speak my native language is bad;" "To speak English is good;" "My primary language is bad, therefore I am bad;" "English is better, therefore the white man is better;" therefore, "I'm no good or not as good as the white man because I am an Indian;" this general sequence is hypothesized as a natural psychological progression in the thinking of a small Indian child forced to reject his primary language and speak a second language under conditions of punishment and threat in an alien world, transacting with alien and often feared authority figures, especially after years of subjection to dominant cultural pressure (Diebald 1966).

This paper does not attempt to prove this point. However, evidence is presented supporting certain specific hypotheses which lend credence to this general theoretical structure.

SUBJECTS

Subjects for this study consisted of a group of eleventh and twelfth grade students at AIS divided into language families as shown in Table I.

TABLE I

LANGUAGE FAMILIES	BOYS	GIRLS	TOTAL
Athabascan (Navajo)	32	37	69
Athabascan (Apache)	6	5	11
Keres and Towa	7	3	10
Tiwa and Tewa	3	3	6
Other (Zuni and Ute)	1	2	3
Total	49	50	99

These language families other than Navajo and Apache include a number of pueblos or tribes. However, because of low numbers and using common language (generally) as a rationale, these were combined into language groups. The subjects had an age range from 16-22.

TESTS

The tests employed in this study are briefly described below.

Test of English as a Foreign Language. This is composed of five sections measuring various aspects of second-language skill: Listening Comprehension, English Structure, Vocabulary, Reading Comprehension, Writing Ability, and Composite. Part scores are useful for diagnostic interpretation, since they identify specific areas of strength or weakness in overall performance (Interpretive Information 1970, p. 4). The test had been administered to 113,975 students from February 1964 through June 1969. Norms are based on the performance of these students.

The validity of TOEFL for predicting college success depends to a great extent upon special characteristics of the college involved. Each college presumably should set its own TOEFL norms. Data have been collected, however, which give a general range of TOEFL scores within which certain outcomes can be expected. Table 2 below reproduces these expectations.

Table 2

TOEFL SCORES	POSSIBLE ACTION
550 and above	No restrictions. Students may be admitted to full-time study in any field. No English as a Second Language courses seem necessary.

450-549	Students appear to need some English as a Second Language training. No restrictions in course load seem necessary.
300-449	Reduced study load; considerable English as a Second Language is needed--perhaps a two-semester sequence of "intensive" or "semi-intensive."
200-299	Student requires full-time intensive English as a Second Language instruction. He is not ready for subject-matter courses in a U.S. university.

Iowa Test of Educational Development. An Achievement test consisting of eight subtests: 1. Understanding of basic social concepts; 2. General background in the natural sciences; 3. Correctness and appropriateness of expression; 4. Ability to do quantitative thinking; 5. Ability to interpret reading materials in the social studies; 6. Ability to interpret reading materials in the natural sciences; 7. Ability to interpret literary materials; 8. General vocabulary; 9. A composite of scores 1-8. The test is presented in written form and every part makes considerable demands on English language ability, aside from content knowledge.

Tennessee Self Concept Scale. A test developed to measure the individual's concept of himself. Quoting from the manual (1965): "The individual's concept of himself has been demonstrated to be highly influential in much of his behavior and also to be directly related to his general personality and state of mental health. Those people who see themselves as undesirable, worthless, or 'bad' tend to act accordingly. Those who have a highly unrealistic concept of self tend to

approach life and other people in unrealistic ways. Those who have very deviant self concepts tend to behave in deviant ways." The scale consists of 100 self descriptive statements which the subject uses to portray his own picture of himself. For this study the following scores were used:

a. Personal Self. This score reflects the individual's sense of personal worth, his feeling of adequacy as a person and his evaluation of his personality apart from his body or his relationship with others. (Fitts, W. H., Tennessee Self Concept Manual, 1965).

b. Family Self. "This score reflects one's "feelings of adequacy, worth, and value as a family member. It refers to the individual's perception of self in reference to his closest and most immediate circle of associates." (Fitts, op. cit.).

c. Social Self. "This is another 'self as perceived in relation to others' catagory but pertains to others in a more general way." (Fitts, op. cit.).

d. Total P Score. This is perhaps the most important single score. "Persons with high scores tend to like themselves, feel that they are persons of value and worth . . . People with low scores are doubtful about their own worth; see themselves as undesirable; often feel anxious, depressed, and unhappy; and have little faith or confidence in themselves." (Fitts, op. cit.).

e. The Defensive Positive Scale (DP). This is a subtle measure of defensiveness. It assumes "that individuals with established psychiatric difficulties do have negative self concepts at some level of awareness, regardless of how positively they describe themselves on an instrument of this type." (Fitts, op. cit.).

f. The General Maladjustment Scale (GM). "This scale is composed of 24 items which differentiate psychiatric patients from non-patients but do not differentiate one patient group from another. Thus it serves as a general index of adjustment-maladjustment but provides no clues as to the nature of the pathology." (Fitts, op. cit.).

g. The Personality Disorder Scale (PD). "The 27 items of this scale are those that differentiate basic personality defects and weaknesses in contrast to psychiatric states or the various neurotic reactions." (Fitts, op. cit.).

h. The Personality Integration Scale (PI). "The scale consists of the 25 items that differentiate the PI group from other groups. This group was composed of 75 people who, by a variety of criteria were judged as average or better in terms of level of adjustment or degree of personality integration." (Fitts, op. cit.).

The Southwestern Indian Adolescent Self-Concept Scale. This scale has been designed to measure the self-concept of the subject population groups. It is a Q-Sort method of evaluating how adolescents feel toward themselves. A high score indicates a more positive self-image; a low score a more negative one. For a complete report of the development of the Southwestern Indian Self-Concept Scale, the reader is referred to the 1966 bulletin entitled "A Study of the Composite Self-Concept of the Southwestern Indian Adolescent" by Gabe S. Paxton. The reference bulletin is Indian Education, Supplement 429S; Washington, D.C., Bureau of Indian Affairs, Branch of Education. This bulletin also provides a comprehensive list of references related to notion of the self-concept.

TEST ADMINISTRATION

All tests with the exception of the Southwestern Indian Adolescent Self-Concept Scale were administered under classroom-like conditions by teachers with, in some cases, the aid of the school psychologist. The exception was administered to the total group in the school cafeteria under the supervision of the school psychologist and members of the teaching staff. Recognizing the severe language deficiencies

present, every effort was made to promote understanding of words and concepts by rephrasing orally and answering all questions. However, it is recognized that some misconceptions and English inadequacy are involved in the results.

RESULTS

Simple one-way analysis of variances were computed between the tribes, sexes, and grades for each variable on all four tests, for a total of 24 variables. Where significant F's were found, t-tests were then computed between the groups to determine where the significant differences actually existed. A multiple correlation analysis was then computed for tribes, grade, sex, and age.

Tribes. The tribes analysis produced no significant differences between the groups on any scale of the ITED. On the TOEFL test there were significant F's on sub-scales 1, 2, 3, 4, and 6 at the $P < .01$ in all cases (Table 3). Inspection revealed that these differences were primarily between the Apaches and the Navajos with the Apaches higher on all the comparisons ($P < .01$). The Apaches were also significantly higher than the Keres-Towa language group combination on subtest 4, Reading Comprehension ($P < .05$). There were no differences between the tribes on the TSC or the Q-Sort self concept scales.

Grades. Analysis of grades on the ITED (Table 4) resulted in a significant F ($P < .01$) for subtest 1 (Understanding of Basic Social Concepts) and a significant F ($P < .05$) for subtest 2 (Background in the Natural

Table 3

Analysis of Variance Tables Comparing the Tribes on the Various Sub-Tests of the Test of English as a Foreign Language

TOEFL 1: Lstening Comprehension

Source	SS	df	MS	F	P
Between	1518.94	4	379.73	6.40	<.01
Within	5462.94	92	59.38		
Total	6981.88	96			

TOEFL 2: English Structure

Source	SS	df	MS	F	P
Between	1306.81	4	326.70	3.78	<.01
Within	7954.69	92	86.46		
Total	9261.50	96			

TOEFL 3: Vocabulary

Source	SS	df	MS	F	P
Between	1497.31	4	374.33	4.94	<.01
Within	6964.69	92	75.70		
Total	8462.00	96			

TOEFL 4: Reading Comprehension

Source	SS	df	MS	F	P
Between	465.31	4	116.33	5.83	<.01
Within	1836.38	92	19.96		
Total	2301.69	96			

TOEFL 5: Writing

Source	SS	df	MS	F	P
Between	201.00	4	50.25	0.85	>.05
Within	5469.56	92	59.45		
Total	5670.56	96			

TOEFL 6: Composite

Source	SS	df	MS	F	P
Between	85392.00	4	21348.00	4.96	<.01
Within	395664.00	92	4300.70		
Total	481056.00	96			

Table 4

Analysis of Variance Tables Comparing the Grades that Resulted in Significant F's Between the Groups

ITED 1: Basic Social Concepts

Source	SS	df	MS	F	P
Between	66.09	1	66.09	7.79	<.01
Within	746.91	88	8.49		
Total	812.99	89			

ITED 2: Natural Science

Source	SS	df	MS	F	P
Between	75.88	1	75.88	6.13	<.05
Within	1089.51	88	12.38		
Total	1165.39	89			

TOEFL 5: Writing

Source	SS	df	MS	F	P
Between	317.94	1	317.94	5.64	<.05
Within	5352.62	95	56.34		
Total	5670.56	96			

TSC: Family Self

Source	SS	df	MS	F	P
Between	193.63	1	193.63	3.94	<.05
Within	4320.81	88	49.10		
Total	4514.44	89			

Sciences). In both cases the twelfth grade scored significantly higher than the eleventh grade. No other significant differences were found on the ITED variables. Grade analysis of the TOEFL test produced only one significant F ($P<.05$) on the Writing subtest with twelfth grade children scoring higher.

On the TSC a significant difference was found between grades only on the Family Self scale ($P<.05$) with the twelfth grade again higher. This is quite possibly a spurious small difference attributable to chance since there is no other supportive evidence.

No differences were found on the Q-Sort self concept scale between grades.

Sex. On the ITED sex differences (Table 5) were found only on subtest 3 (Correctness and Appropriateness of Expression) with the females scoring higher than the males ($P<.01$). TOEFL analysis of variance (Table 5) indicated sex differences in favor of the females on English structure ($P<.01$), Vocabulary ($P<.01$), Writing ($P<.05$), and Total Score ($P<.01$).

There were no sex differences on the self concept tests scores (TSC or Southwest Indian Q-Sort).

Self Concept. There did not appear to be any difference nor a consistent pattern between the tribes or sexes on the Self Concept scales. There were no major differences between the grades on the same scales, though the twelfth grade children did seem to consistently score slightly higher than the eleventh grade children. None of these differences were significant at the .05 level of confidence.

Table 5

Analysis of Variance Tables Comparing the Sexes that Resulted in Significant F's Between the Groups

ITED 3: Correct Expression

Source	SS	df	MS	F	P
Between	159.07	1	159.07	15.02	$<.01$
Within	931.83	88	10.59		
Total	1090.90	89			

TOEFL 2: English Structure

Source	SS	df	MS	F	P
Between	1175.63	1	1175.63	13.81	$<.01$
Within	8085.87	95	85.11		
Total	9261.50	96			

TOEFL 3: Vocabulary

Source	SS	df	MS	F	P
Between	613.81	1	613.81	7.43	$<.01$
Within	7848.19	95	82.61		
Total	8462.00	96			

TOEFL 5: Writing

Source	SS	df	MS	F	P
Between	244.94	1	244.94	4.29	$<.05$
Within	5425.62	95	57.11		
Total	5670.56	96			

TOEFL 6: Composite

Source	SS	df	MS	F	P
Between	33056.00	1	33056.00	7.01	$<.01$
Within	448000.00	95	4715.79		
Total	481056.00	96			

Tests for significance were conducted between the students' scores on the Self Concept scales and the norms reported by the publishers. Only the Total Positive Scale comparison resulted in a significant difference between the groups ($P < .01$). In spite of this, there did appear to be major differences between the groups on several of the other scales. These include the Family Self, Social Self, General Maladjustment, and Personality Disorder. In all cases except Personal Self and Defensive Positive Scale the norm groups were higher. There appear to be little or no differences on the Personal Self, Defensive Positive, or Personality Integration of the TSC, nor Q-Sort.

Multiple Correlation. Multiple correlations were computed relating all four variables on the four instruments to Grade, Sex, Age, and Tribe. These results are summarized in Table 6 with two of the R's significant at the .01 level (Grade and Sex) and two R's significant at the .05 level (Age and Tribe). In all four analyses, nine of the one-way comparisons were significant at the .05 level and only one significant at the .01 level. Although these correlations were found to be significant, their magnitudes were so small (ranging from .24 to .33) that they must be interpreted with caution.

Three of the subtests on the ITED (Basic Social Concepts, Background in Natural Science, and Interpret Material in the Natural Sciences) correlated positively with grade. The Correctness and Appropriateness of Expression subtest on the ITED and the English Structure on

TABLE 6

MULTIPLE CORRELATION (R) BY GRADE, SEX, AGE, AND TRIBE, WITH THE SUBTESTS ON EACH INSTRUMENT THAT SHOWED A SIGNIFICANT CORRELATION WITH EACH VARIABLE.

GRADE	R=.72	P<.01	ITED 1 ITED 2 ITED 6	r=.25 r=.24 r=.25	P<.05 P<.05 P<.05
SEX	R=.77	P<.01	ITED 3 TOEFL 2 Q-Sort	r=.33 r=.29 r=-.24	P<.01 P<.05 P<.05
AGE	R=.60	P<.05	ITED 1 TSC 2 TSC 6	r=.28 r=.25 r=.27	P<.05 P<.05 P<.05
TRIBE	R=.62	P<.05	TSC 2	r=.29	P<.05

the TOEFL both correlated positively with Sex (females higher), while the Q-Sort correlated negatively with Sex. Basic Social Concepts, Family Self and General Maladjustment correlated positively with Age, while the Family Self correlated negatively with Tribes (Navajos lower). In general, the multiple correlation data may be considered to have given minimal support to the analysis of variance data.

DISCUSSION

TOEFL Test.

TOEFL scores are presented in Figure 1. The AIS federal school and Bordertown scores for the subjects are shown in relation to norms for foreign students and native English speaking anglo students from two sources and grade levels: Albuquerque Academy, grades 7-8, and the University of New Mexico, grade 13 (Freshmen). Test scores from the Institute of American Indian Art derived from the study by Scoon and Blanchard (1970) are also presented to show another Indian population sample.

As the scores indicate, Indian students at AIS and in the Navajo Bordertown program have scores falling within the 300-449 range on the Vocabulary, Reading Comprehension, and Writing subtests. This indicates that these students require considerable study in English as a second language (ESL)--perhaps a two-semester sequence of "intensive" or "semi-intensive."

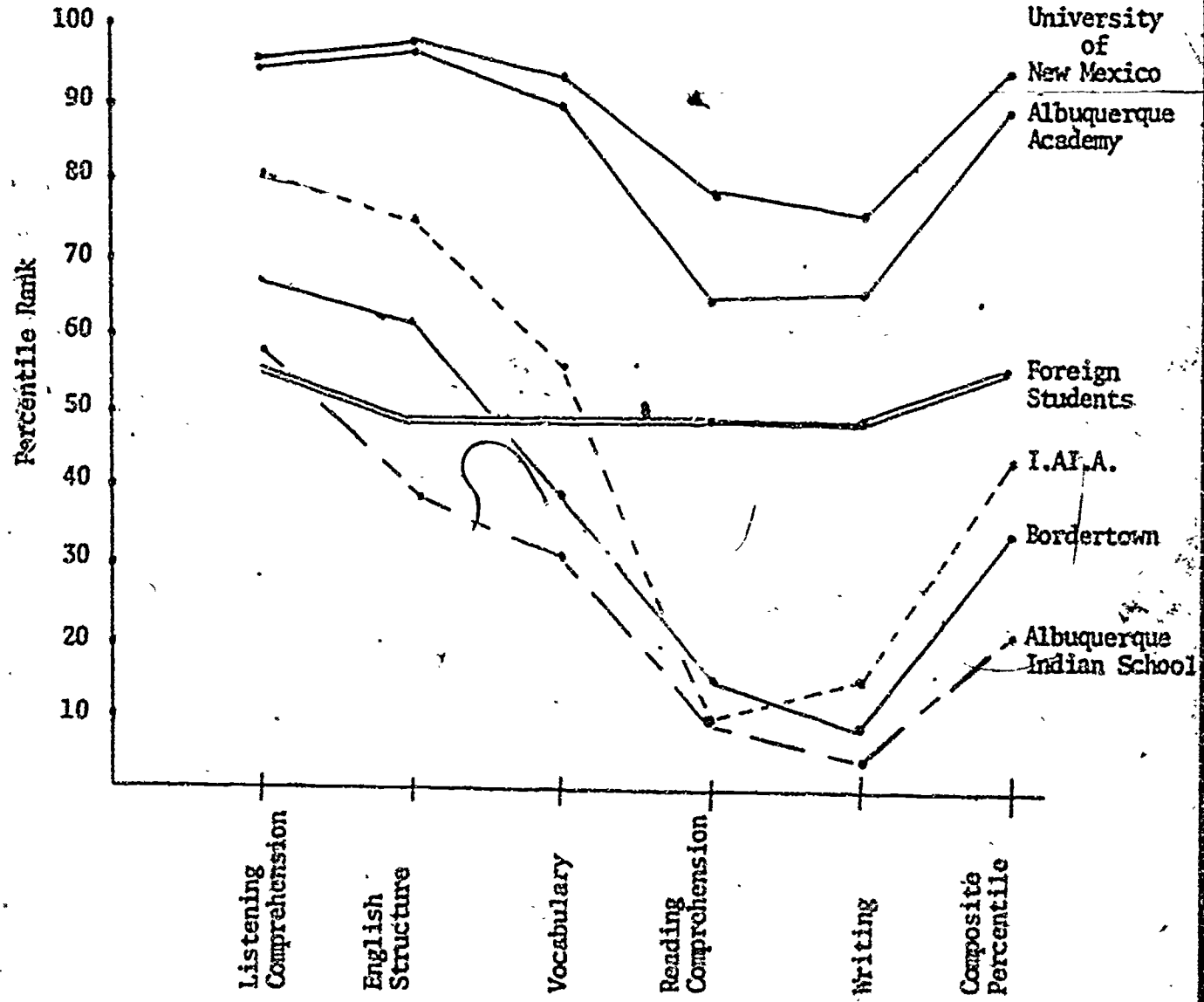

Fig. 1. Percentile Scores per group on the Test of English as a Second Language.

The Indian student scores on this test are sufficient to explain the high attrition rate of Indian college students, especially during the critical first year. Although the Bordertown scores are all higher than the AIS scores they still indicate the same deficiencies at almost the same severity. Bordertown is, as mentioned earlier a Navajo Nation program. Criteria for selection for Navajo students includes achievement scores indicating educational retardation of one year or less. Navajos at AIS generally are educationally retarded two to four years. While this difference does exist, possibly due to an intelligence factor, the TOEFL scores still point to a depression in academic achievement potential due to the ESL problem. The methods for teaching ESL to Navajos have undergone some revision in recent years, starting around 1964 and receiving strong support in 1966. The students in this study do not reflect this effort. It is our belief, however, that any ESL program, to be effective and to eliminate the potential of tribal and self identity degradation, must take into account the affective concommitants of the primary language in the Navajo child's life. This would imply that ESL should be started in the child's home prior to kindergarten, preferably by a Navajo and under conditions which do not degrade the primary language and subsequently the Navajo culture and the child's self-concept. Apache and Pueblo ESL methods should also be subjected to close examination to determine needs in this critical area.

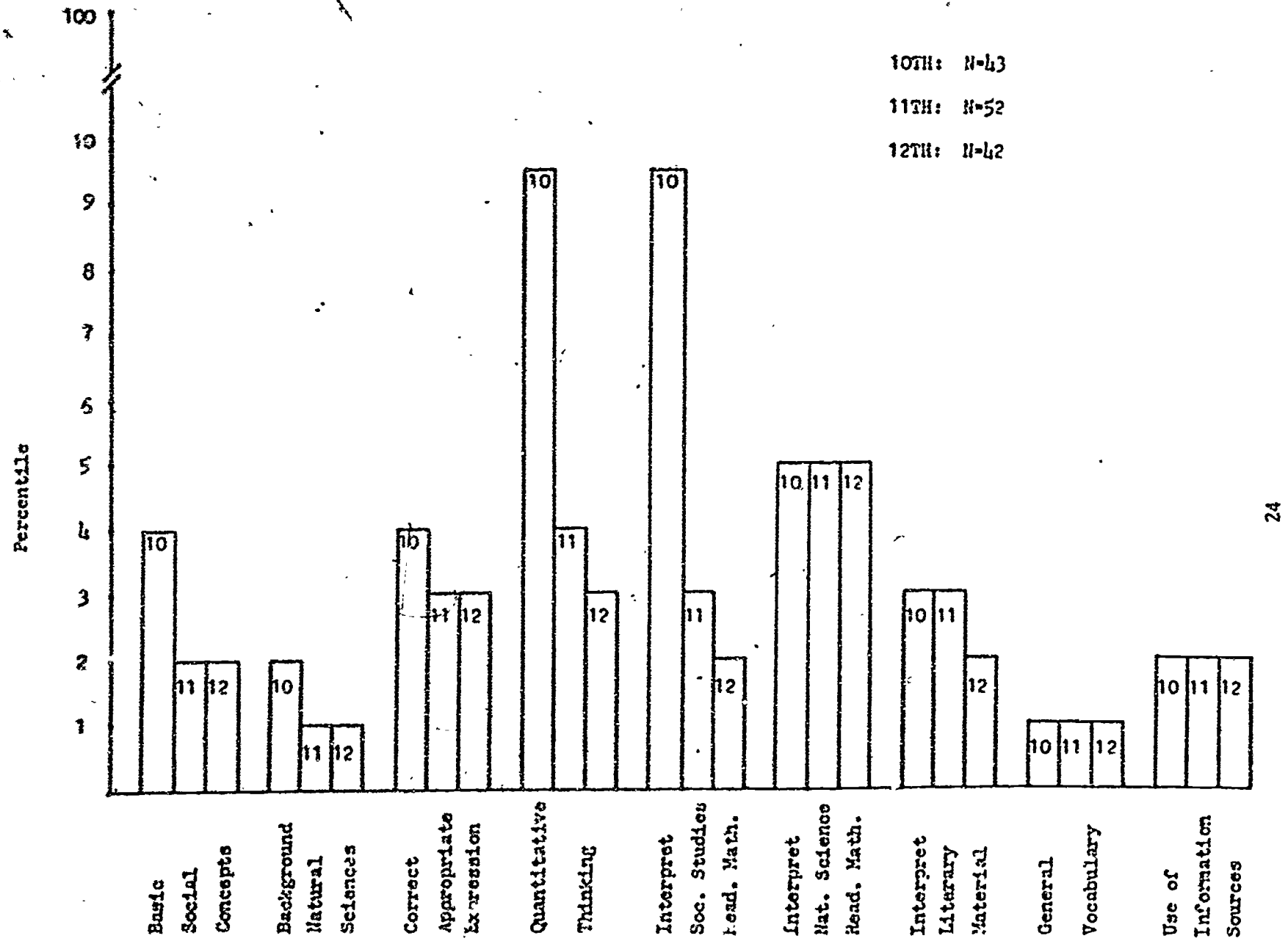

Fig. 2. Percentile Scores for 1970 10TH, 11TH, and 12TH grade children at Albuquerque Indian School on the Iowa Test of Educational Development.

ITED Test.

The percentile scores for the AIS tenth, eleventh, and twelfth grades presented in Figure 2 is a classical example of the increasing retardation we are finding in achievement tests at the high school level. As the scores indicate, none of the grades achieve at even the tenth percentile level when compared with national norms. As important is the fact that there is a decrease in achievement between the tenth and twelfth grades. This is the opposite of what we normally would expect. While the reasons for this are unclear several speculations are in order.

As we have noted from the previous findings (Scoon and Blanchard, 1970), the ITED is essentially a test of English language facility. This being so, one might speculate that the decrease in achievement levels might reflect a tendency on the part of the students to quit trying as they continue to experience increasing failure and frustration with ESL. Observational evidence tends to substantiate this conjecture. One can easily observe students go into a guessing routine on these tests after encountering initial failure. That the threshold should lower with the passing years is not difficult to understand.

Whatever the reasons, the ITED and the TOEFL suggest that these students are not being adequately prepared to achieve and succeed in a highly verbal English-speaking academic world. Any program geared

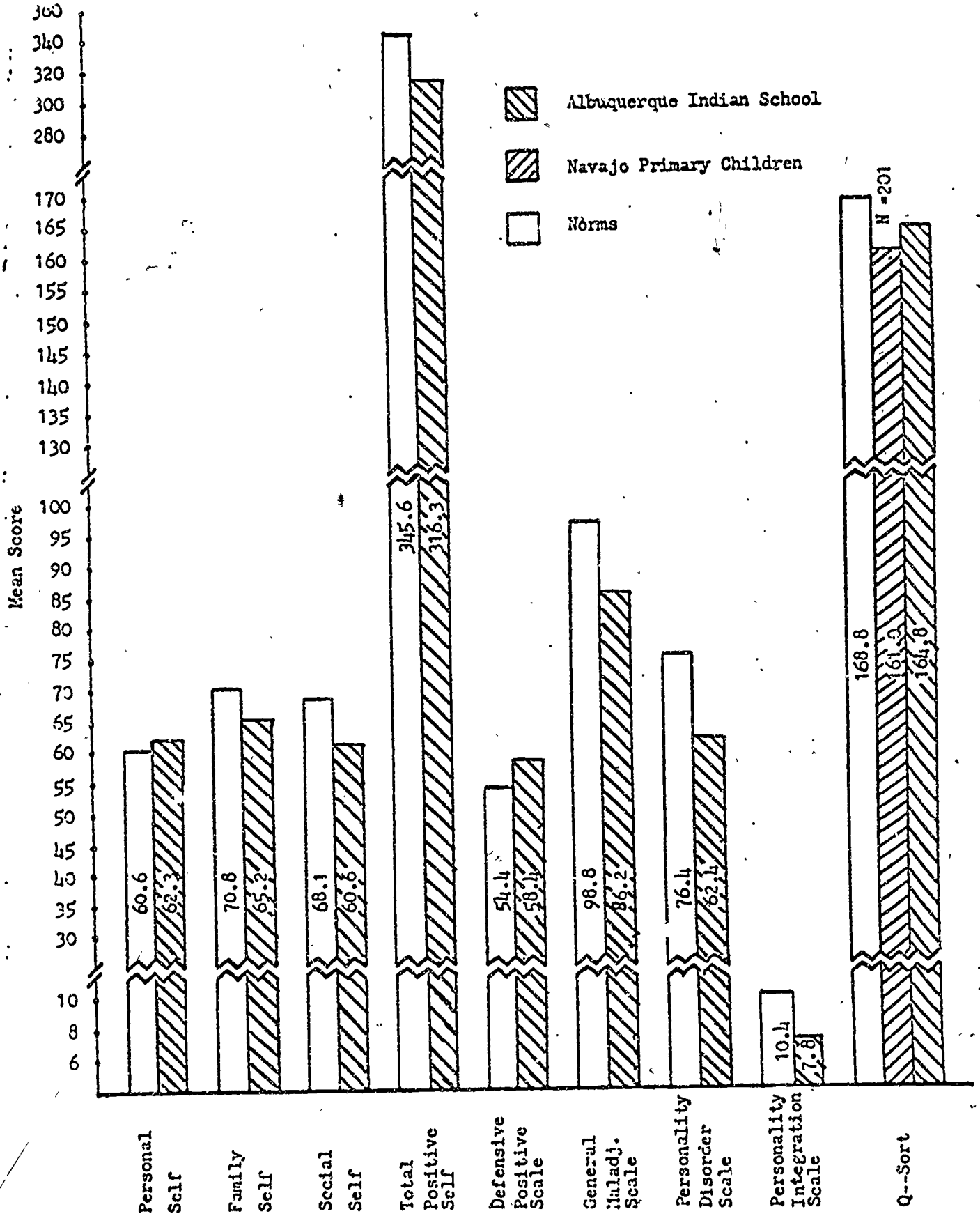

Figure 2. Mean Score on the Tennessee Self Concept Scale and The Southwestern Indian Adolescent Self Concept Scale (Q-Sort.).

to change this fact must address the ESL problem, including the Cognitive and Affective domains. The discussions to follow on self-concept will help emphasize this point.

Tennessee Self Concept Scale.

Time did not permit a complete analysis of the scores on this test. The subtests selected have been previously defined. Their selection over the others was an intuitive act on the part of the authors. A comparison of AIS students' scores with the national norms may be found in Figure 3. The only significant differences found were on the Total Positive Self scale.

The Personal Self. The difference in this case is not significant, although it is in the direction of a slightly higher feeling of personal self worth.

The Family Self. The feeling of inadequacy and lack of self worth and value as a family member and in relation to peers and other close associates are not unexpected findings. These scores reflect the process of alienation which goes on in boarding school life. The life the student lives in the dormitory is drastically different from the life he lives in his home community. Peer group relations play an extremely important role in the school environment where there are few, if any, "accessible" elders. The peer group pressure is somewhat diminished at home because of the traditional lines of "advice giving." It is recognized that some of these traditional

family and tribal ties have broken down but many continue to operate effectively with some students. This is truer of some tribes than with others.

The lessons learned at home and the supports provided are not present in the boarding school setting. One cannot dismiss the possible lag in personality development which might be picked up as these children are compared with other students whose developmental background has been significantly different from theirs.

It should also be remembered that adolescence is not yet a viable age group in all tribes. One is either a child or an adult. Forcing a "teenage culture" on some of the students could result in a distortion of the interpersonal self.

Suggestions have been made to the effect that the boarding school summer-at-home cycle results in an alienation process at both ends which leads to the student being stranded in a familial and cultural no-mans-land. Closer examination, however, especially of the Pueblo cultures, does not always support this contention. This area deserves closer attention, but it is an observable fact that children have learned many appropriate tasks in their family group from an early age. These they can readily involve themselves in upon return home. In some instances their summer time contribution is a deciding factor in terms of adequacy of income for the family.

The Family Self scores may also reflect some degree of family break-

down where an individual would have difficulty with parental identification. For example, the outstanding unemployment rates which are fairly constant range from 40% to 75% for Indians in certain areas. Seventy-one percent of Indian arrests are alcoholic related.

The Social Self. One cannot lose sight of the threatening atmosphere of the boarding school to a student regardless of the surface adjustment. To be bossed in a punitive manner with little, if any, love being communicated or caring relationships established over a long period of time facilitates the development of certain defences which, while they may serve to prevent disintegration of self result in severe developmental deficiencies. The "non-problem" students sometimes identify with the "problem" students and take on characteristics of "bad" people. By the same token the acting-out students may to some degree recognize the futility of their attempts at individuation and realize that they, too, will eventually give in to the system and what it teaches them about themselves. In such a manner the self-fulfilling prophecy often becomes internalized and development further stymied.

Much emphasis in Indian life is placed on being a "Good Person" in relation to one's self and others. In the privacy of their personal conscious experience these students may be able to make a fairly realistic assessment of their self worth. It may be that this assessment is an area that touches more closely on early learning experi-

ences at home and less on the school environment with its often negative expectations and sometimes disasterous self-fulfilling prophecies.

The school system at AIS, like most other schools in the country (Glasser, Schools Without Failure, 1969) has been failure oriented. While a concerted effort is being made under the current Title I Motivational Environment program to change the situation at AIS, failure still abounds. Yet, many students will come to a federal boarding school like AIS after having experienced too much failure in public schools. However, being passed through a school and out into the world through a process which is characterized by low staff expectations and failure is not a success. To graduate under these conditions is a punishment to that person and may indeed be the final blow that pushes one into alcoholism or other devastating behaviors and self-defeating life ways.

The TOEFL and ITED scores examined earlier are sufficiently illustrative of the fact that seniors are graduated ill-prepared to do anything that requires English verbal ability. Lack of English ability in a boarding school environment, and a general culture where it is demanded is in itself a sufficient explanation of the low Social Self scores.

The fact that many families push their children into boarding schools contributes to low Family and Social Self concepts. Other parents

have no concept of what it is really like in the boarding schools and uncritically accept communications from school authorities that their children are "bad" or behaving badly. With some it is enough that their child attends school. Many do not fully comprehend the full implications of the boarding school process, especially the disruption and cultural dissonance involved in what is essentially a forced acculturation process. Such inadvertant family neglect further increases the child's sense of alienation as a family member, believing that the family doesn't understand. Caught in a social situation, a boarding school culture which is exceedingly complex; lacking in communication skills; in some cases feeling isolated and alienated from family support, it is small wonder that many students show low family and social self concepts.

The Total P Score. The large differences found between subjects and the norm group on this score can be attributed to the Social and Family scores, and perhaps other self concept variables not included in this study. Regardless of the specific contributors the low P scores demonstrate a low overall level of self esteem; students see themselves as having little self worth; and they express little self confidence. It is suggested by the scores available that the apparent low self concept is in relation to their general interpersonal behavior and not necessarily in terms of their personal worth; in a phrase--lack of social communication and coping skills, (Coleman 1966, p. 319-24).

General Maladjustment Scale. This scale strongly supports a high degree of maladjustment when compared with norms. This may be merely saying that Indian students general mode of behavior is different from those of the cultural value systems of the group from which the norms were derived.

Personality Disorder Scale. The degree of personality disorder, that is, basic personality defects and weaknesses, is quite marked when contrasted with the norm group. Concerning the norm group, Fitts (Tennessee Self Concept Scale Manual, 1965) states: "The evidence so far suggests that there is no need to establish separate norms by age, sex, race or other variables . . . The norms are over-represented in number of college students, white subjects, and persons in the 12 to 30 year age bracket." With this in mind such evidence must be weighed with care considering the Indian cultural and social value systems. Further research in this area is needed and we hope to accomplish this in the near future. What we have gathered from this test so far, however, appears to be in agreement with clinical and academic observations of poor self esteem and lack of English language and anglo culture communication and interpersonal skills.

The Southwestern Indian Adolescent Self-Concept Scale (Q-Sort). This Q-Sort self concept scale has norms established on southwest Indian children, the same group from which our sample is largely

derived. Here we find a sample score of 164.8 which is a little lower than that of the norm group (169.8). However, it is higher than that in the Johnson/Vineyard (1969) study with Navajo primary school children (161.0). This self concept score lends little support to the Tennesse Self Concept (TSC) data. In general, we can state that the sample of southwest Indian students drawn from the AIS population, consisting of Juniors and Seniors of both sexes and representing the various tribal groups have relatively poor self concepts as measured by the TSC instrument.

Tribal Differences. Differences among tribes found on the TOEFL were not expected. It is generally highly significant that, with one small exception, the differences are only between the Navajos and Apaches in favor of the Apaches. Anecdotal evidence would suggest English in the home prior to formal schooling is a major factor. If this is the case, then one would expect the Apaches to be better in areas of English where more casual home exposure is experienced. This casual exposure would include not only oral and aural factors but also visual factors such as books, TV, and more identification of favored food and other labels in stores. With this in mind let us look at the areas where Apaches excel the Navajos (Apaches in this study are mostly Mescalero).

As Table 3 indicates, the Apaches excel on the TOEFL in every area except writing. They apparently have a greater comprehension of the language visually as well as aurally, but they also have a greater

technical knowledge. It is only in writing ability that the Apache does not excel as assessed by the TOEFL. Here, the Apache along with the rest of the Indian groups plummet to extremely low levels even in comparison with foreign students (Fig. 1). Two factors appear to be operating here. One is a pre-school exposure factor during earlier years by parents and other significant persons. Thus, TOEFL scores would indicate that writing is not modeled much by any parents, including Apaches. The second factor is a school exposure factor specific to writing ability. In this case all tribal groups plummet to extreme lows, including the Apache. (Navajo mean, 33.28; Apache mean, 36.27 as compared with foreign students, 48 and native English speakers, 55.4). Assuming parental modeling and higher general exposure to account for differences in other English areas, how do we account for such low writing scores. One might postulate a visual-motor problem in all Indian children, yet this seems difficult to defend. Our opinion is that poor writing ability has to do with methods of teaching ESL and especially writing in Indian schools; methods which actively and aversively condition Indian students against learning to write English well. This area should be subjected to critical examination.

Thus, writing becomes a depressive leveler in academic achievement of all Indian students. This contention is substantiated by the low achievement scores on the ITED, where there were no tribal differences.

Grade Differences. The ITED analysis by grade (see Fig. 2 and Table 4)

further illustrates and supports increasing academic retardation during the high school tenure. Only two of the ten subtests of the ITED were significant in favor of seniors and only one at the $P < .01$ level of confidence. Indeed, as Figure 2 demonstrates, there is a general increase in educational retardation. One must suspect ESL problems on the basis of the TOEFL, especially writing and, to a lesser degree, reading comprehension.

Another point to consider is the fact that the ITED emphasizes the understanding, interpretation, and expression of concepts; and the application and expression of acquired knowledge--all of this through the medium of the English language. This process involves conceptualizing in terms of abstract thought processes which are mediated by the English language. If the student has a primary language which is oriented toward concrete expression, and if his ESL capability is limited, then one would expect that his ability to comprehend and express abstract ideas in English would be poor. Such appears to be the case; thus English, the medium, becomes the message!

Sex Differences. Females show a greater degree of competence in the more technical aspects of English (Table 5). The implications of this evidence are unclear and no attempts will be made to address this area at this time

CONCLUSIONS

All of the tests used in this study yield scores for Southeast Indian students well below the means scores established as norms using other

population samples. Even if one were to postulate that cultural and social value system factors contribute to some of the differences, such could not explain away major deficiences crucial to academic achievement and economic potential.

The evidence supporting low English-as-a-second-language-skill seems overwhelming. The evidence that educational retardation continues to increase through the high school years continues to accumulate. It appears almost certain that an English language factor is primarily responsible, or at least contribu' s greatly to this problem in achievement.

This study strongly supports the contention that Indian tudents have low self concepts, especially in the transactional aspects of personality development and self identity. Here again we cannot ignore the language component involvement. In the boarding school environment English is the academic and cultural primary l nguage. Interpersonal relationships are partly dependent on effective communication in the English language. Certainly, the ability to satisfy basic interpersonal needs with Significant Others in the school environment demands cognitive and affective English language communication skills. If we assume that educational retardation, a low self concept, and skill in the English language are somehow interrelated in Indian students, then one must assume that preventive and remedial approaches must address each area on an affective as well as a cognitive level. It seems apparent that the Navajo child, for example needs to be exposed

to English in his home environment under conditions which allow him to become bilingual without any degradation of his primary language, his culture, and, almost inevitably, his self worth.

Our schools are failing to educate our Indian youth. We are turning out illiterate high school graduates who come to our schools initially with demonstrated higher-than-average potential. In some cases self-fulfilling prophecies, some of which are downright racial in character have depressed that potential and failed the student into self-defeating obscurity or angry notoriety.

It is possible to teach skills and knowledges without using such transactions to impose unwanted values from a dominant culture which is already oppressive even if only from sheer size and its Siren lure of technological products.

To do so--that is, to teach skills and knowledges to non-native speakers of English; having to use the language of the dominant culture as the educational medium without degrading the minority culture, its language, and the individual is no easy task. One of the most demanding tasks is the teaching of the medium for other teaching, for learning, i.e., English-as-a-second-language. This cannot be accomplished by addressing the task only in terms of methodology, linguistic or otherwise.

Language, Culture, and Self are inextricably interwoven. The fabric of Being must be kept intact if real ESL and academic skills and

knowledges are to be effectively taught. You cannot degrade one without degrading all (Language, Culture, Self).

It is time that the basic principles of human development, human needs, and human learning be brought to bear on this critical problem of the failure of Indian education.

We can have Human Unity without sacrificing Cultural Diversity. We can have Cultural Diversity without sacrificing Human Unity.

Indeed, much of our research--including that presented in this paper--indicates that attempting to have one at the sacrifice of the other wrecks the machinery of both!

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