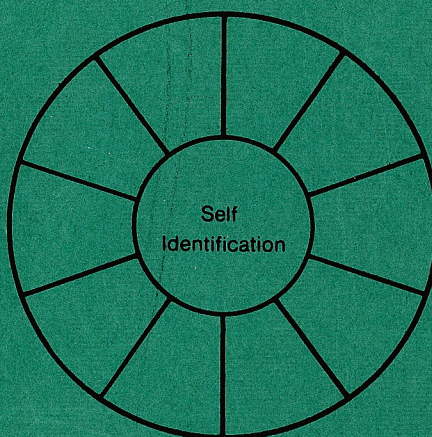


# **INTERCULTURAL EDUCATION:**

**A Study of the Effects of Interperson-Perceptions upon  
Indian and Non-Indian Pupils in Southern Alberta**



**Presented to the  
Department of Indian Affairs  
and Northern Development**

Louise C. Lyon  
John W. Friesen  
W. R. Unruh  
Raymond L. Hertzog

Faculty of Education  
University of Calgary

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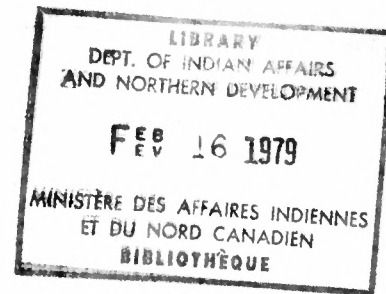
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To The Honourable Jean Chretien  
Minister Indian Affairs and Northern Development  
400 Laurier Avenue West  
Ottawa 4, Ontario

The Minister of Indian Affairs and Northern Development requested in 1969 that the Indian Studies Group of the Faculty of Education of The University of Calgary undertake a study of the effects of interperson-perceptions upon Indian and non-Indian pupils in Southern Alberta, and to offer recommendations where benefits for the education of native pupils could be gained.

We herewith present Parts I-V of the five part study.

Louise C. Lyon  
Coordinator



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## Research Acknowledgements

To the Joint Advisory Committee of the Indian Studies Group, the University of Calgary, which included representatives of Indian bands of Southern Alberta, school administrators, Department of Indian Affairs personnel, and University of Calgary expertise, acknowledgement is given for the hours of consultation given without which the research would not have been possible.

Mr. Sykes Powderface, Chairman, Morley Reserve

Mr. Percy Yellowfly, Blackfoot Reserve

Mr. Fred Gladstone, Blood Reserve

Mrs. Louise Bigplume, Sarcee Reserve

Mrs. Mary Ruth McDougall, Peigan Reserve

Mr. Harold Cardinal, Native Peoples Association, Alberta

Mrs. Mary Greene, Calgary Separate School Board

Mr. E. M. Ericson, Calgary School District No. 41

Miss Vicki Crowchild, Department of Indian Affairs

Mr. E. R. Daniels, Department of Indian Affairs

Mr. E. Dosdall, Department of Indian Affairs

Mrs. Sue Sollner, Department of Indian Affairs

Dr. Louise C. Lyon, University of Calgary

To the Indian Studies Group, University of Calgary, who also gave consultation time and effort, acknowledgement is given.

Dr. Louise C. Lyon, Coordinator

Dr. R. Carswell, Educational Curriculum and Instruction

Dr. John Friesen, Educational Foundations

Dr. Raymond L. Hertzog, Educational Psychology

Dr. E. L. Koch, Educational Administration

Dr. A. J. Proudfoot, Educational Administration

Dr. W. R. Unruh, Educational Psychology

To the staff of the University of Calgary who assisted in the Intercultural class and to the Department of Educational Foundations, the University of Calgary, who sponsored the class, gratitude is expressed.

To Mr. Hugh Dempsey, Glenbow Museum, Calgary who assisted by giving the initial university lecture "The Role of Native Cultures in Western History: A Talk to Teachers" for implementation of the Intercultural class, acknowledgement is given.

To the Department of Indian Affairs and Northern Development, who sponsored the research, acknowledgement is given.

To the teachers and pupils who took part in the study, gratitude is expressed. These were the people who were the viable learning situation studied.



## INTRODUCTION

An area vastly in need of study in the field of Education today is that of intercultural education. Intercultural education involves the similarities and differences which exist in cultural socialization practices; similarities which make the teacher's work of inducing learning easy; and differences which seem to make that task, in certain instances, almost impossible. While intercultural education may be considered by some as including trans-cultural implications between nations, greater intensification of intercultural understandings can be discovered through studies of carefully defined geographical regions within a nation. This study involved the latter application, i.e. research in Southern Alberta of trans-cultural perceptions of Indian and non-Indian pupils and their teachers in culturally integrated and non-integrated classrooms.

The research reported here was conducted for the Canadian Department of Indian Affairs and Northern Development with the express purpose of seeking effects of similarities and differences in interperson-perceptions of the pupils and teachers involved. The researchers were invited to explore these perceptions to attempt to gain understandings of self identification which Indian and non-Indian pupils might hold in common, as well as those in which they might differ.

Eisenstadt has explored the transfer of identification and extension of solidarity for an individual in a socialization process.<sup>1</sup> He contends that such identification and solidarity is impossible unless the general system of norms of the social system harmonizes with those of

the family. Family extension to the community, the "bridge" across which the child walks from a secure family orientation to community citizenship, must be assisted in the intercultural process. The teacher is the assisting agent. As such, the teacher must be given the tools and understandings to bridge for the child, where necessary. The teacher's goal is to inculcate bridging abilities in the learner. The child of a minority culture must bridge not simply to concepts of the majority in the community but also to people of other cultures in the community in primary and secondary relationships. The education expertise which aids this kind of learner requires:

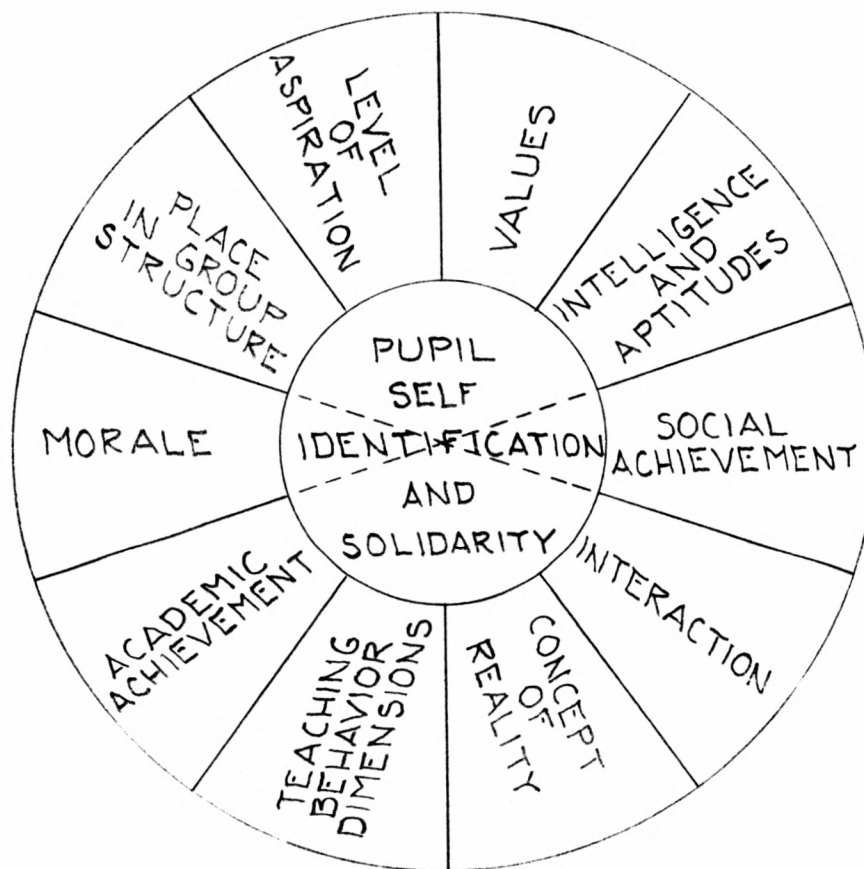
- 1) delineations of culture similarities and differences, 2) skills to cope with differences and encourage similarities, 3) communicative abilities to engender cross-cultural interactions which are positively rewarding.



### Indian and Non-Indian Perceptual Considerations

This present research can only be considered a beginning effort to approach the first intercultural education consideration: delineations of culture similarities and differences. The research attempts to provide some understandings whereby teachers and administrators may gain more insights into their task of trans-cultural linkages. The graphic figure below indicates the many-faceted approaches used by the researchers as attempts to gain such insights:

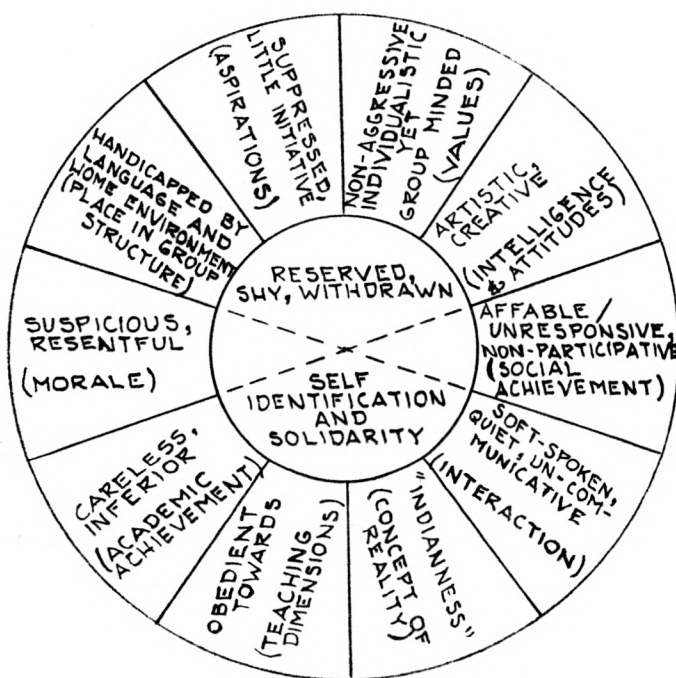
Indian and Non-Indian Pupil  
Interperson-Perceptions



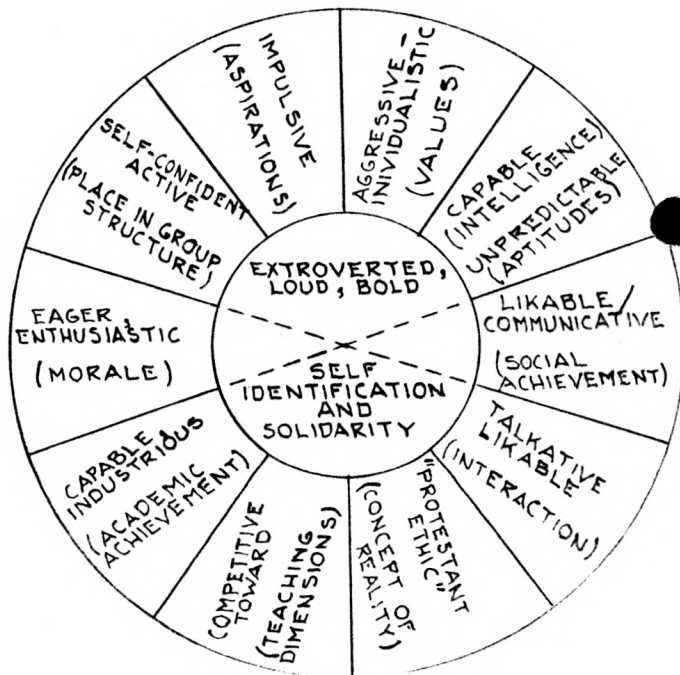
Note: Interdependencies may be read in areas opposing each other on the paradigm, e.g. Morale and Social Achievement.

In a broad sense, if previous research indications are predictive criteria, then the many-faceted approaches would differ greatly for Indian and non-Indian pupils.<sup>2</sup> Similarities and differences which might exist between Indian and non-Indian pupils' interperson-perceptions may provide almost polar opposite constructs of pupil self indentifications and solidarities, i.e.:

Conjectures  
re  
Indian vs. Non-Indian Pupil  
Interperson-Perceptions<sup>3</sup>



Indian



Non-Indian

Note: Interdependencies of variables may be read in areas opposing each other on paradigms.



The non-Indian pupil may hold aggressive and individualistic motivations which appear in Grades Five through Nine to be in competition with their concepts of teaching behavior dimensions to a degree where a culture gap seems to exist between teacher and pupil.<sup>4</sup> The Indian pupil may endorse non-aggressive, individualistic, yet group-minded ambivalences engendered by disparities between school and home identifications, disparities which give a surface "obediency" in attitudes towards teaching behavior dimensions.

The non-Indian pupil may appear to be capable in intelligence and unpredictable in aptitudes with more than one avenue of accomplishment open, and his academic achievement may reflect his competency and industriousness, particularly when viewed in contrast to an Indian pupil. The Indian pupil, while artistic and creative in intelligence and aptitudes, may appear careless and inferior in academic achievement when tested by analytically-oriented tests of competence.<sup>5</sup>

In social achievement, the non-Indian pupil may perceive success to be "being considered likable and communicative," which when achieved, would provide him the primary group sanctions of his peers and make him feel eager and enthusiastic in morale. The Indian pupil, on the other hand, may seem to be unresponsive and non-participatory (although affable) in social relations -- these being "good" Indian social skills; and because they are not considered successful social behavior in a predominantly White society, may appear suspicious and resentful when gauged by non-Indian standards of morale.

The non-Indian pupil may appear to be talkative and likable in his interactions with others in the learning environment and successful in achieving a place in the class group structure due perhaps to his self-confidence

and active social linkages. The Indian pupil, on the other hand, may be soft spoken, quiet, and uncommunicative in interaction, and handicapped by language and home environment in his social linkages, particularly when these are measured in the group structure of an integrated classroom.

The non-Indian pupil endorsing the "Protestant Ethic" concept of reality, yet contacting a myriad of social impressions from all age groups and an advanced technical society, may appear to be impulsive in his aspirations. The Indian pupil who endorses "Indianess" or a nature-oriented concept of reality may be suppressed and show little initiative in academic or technological aspirations.<sup>6</sup>

These elements were selected and studied by the researchers to gain indications of interperson-perceptual similarities and differences between Indian and non-Indian pupils. They will be considered in the report which follows, although not necessarily in the order presented.

Preliminary Check: Teacher Descriptive Designations of Indian and Non-Pupils.

As a preliminary indication of the appropriateness of these constructs with the sample to be tested, teachers in the study were invited to respond to a preliminary "adjective" survey, a "Free Response Inventory"<sup>7</sup> in which they could tell what they "really thought Indian and non-Indian children were like." Twenty-three of the twenty-nine teachers in the study responded. Their first five rank-ordered responses are revealed:

# Descriptive Designations of Teachers for

Indian Pupils	Non-Indian Pupils
R.O.	R.O.
1 Reserved, shy withdrawn	1 Extroverted, loud, bold
2 Soft-spoken, quiet, uncommu- municative	2 Communicative, responsive
3 Affable	3.5 Talkative and likable (easy to talk to)
5 Suspicious and resentful	3.5 Aggressive or argumentative
5 Unresponsive, non-participative	5.5 Active
5 Careless, inferior in academic achievement	5.5 Friendly

Note: The entire rank-ordered list of teacher descriptive designations is given in Appendix III-ii, pp. 126,127, Part I.

The difference in pupil descriptions by the teachers of Indians and non-Indians reveals sharp contrasts. To the teachers who responded, Indian pupils seem to be "introverted," non-participants in learning, while non-Indian pupils appear to be "extroverted," aggressively active learners. If Indian and non-Indian pupils are so opposite in behavioral characteristics, and research tends to support this,<sup>8</sup> the intercultural teaching task must indeed be in need of research and practical solutions.

Volume II of the Hawthorn Report speaks of a dilemma for both the teacher and the Indian child as learner:

The child on entry and the teacher do not implicitly share as many values and expectations as do the teacher and the typical middle-class White child. The Indian child does not know what the teacher expects of him and perhaps the teacher does not discern his ignorance or understand the background of it. With the many barriers of language, age, preoccupation and timidity along with others, the entering child and the busy teacher can embark on no dialogue to explore their differences in outlook. Undoubtedly both suffer, and for the child the outcome is a challenge to his identity. He finds he is not what others expect him to be. What he is never becomes clear but is plainly not what is wanted.<sup>9</sup>

In a society where value orientations are supportive of pupils who



are actively-oriented, extroverted and communicative, the tragedy of the Indian child attempting to "hold his own" in learning, and thereby achieving and maintaining a positive self-identification, seems hopeless. In a pluralistic society, which prides itself upon its willingness not only to tolerate but encourage a variety of cultures, teachers who could endorse such differences in pupil descriptive designations would seem intolerable unless their responses signify their frustrations in dealing with learners so foreign to their understandings. If their descriptions are valid, it would seem that an advanced society such as this should remedy its intercultural education approaches. Unfortunately, until more is known about intercultural education, the intent and means may be there, but adequate understandings, skills and processes may be lacking.

#### Sample Population Designations for the Research.

Six hundred and sixty-six pupils in Grades Five through Nine were assessed to discover understandings for classroom teachers and administrators dealing with Indian and non-Indian pupils. The classrooms were, for the most part, in rural areas of Southern Alberta; however, three classrooms within the City of Calgary were also included. Three of the classrooms, made up entirely of Indian pupils, were on reserves: one at the Stony Reserve at Morley, Alberta, and two at Crowfoot School on the Blackfoot Reserve at Cluny, Alberta. Indian pupils involved in the study included not only those of Stony and Blackfoot origin but Sarcee pupils as well.<sup>10</sup>

In all, twenty-nine classrooms, their teachers and pupils, were studied in two research groups.

Table i  
Classroom Research Delineations  
Indicating  
Number and Sex of Teachers Involved

	Study Group I	Study Group II
Male Teachers	9	9
Female Teachers	<u>6</u>	<u>5</u>
	15	14

The classrooms involved in Study Group I numbered fifteen. The nine male and six female teachers involved attended an intercultural class offered by the Department of Educational Foundations, the University of Calgary. The course was designed to provide these teachers with understandings of educational disciplines applied to intercultural education. Lecturers for the class included professors from or in the Faculty of Education and School of Social Work; a representative of the Glenbow Museum, Calgary; and Indian Affairs educational administrators. The teachers of the non-integrated Indian classrooms at Morley and Cluny were included in this study group. One city classroom teacher also was included.

Fourteen classrooms made up Study Group II with nine male and five female teachers. The teachers of this study group did not attend the intercultural class. Teachers of two city classrooms were included in this study group; the rest taught in rural areas.

The pupil population was not consistently given each type of

measurement due to absenteeism of pupils, appropriateness of instrumentation for testing sample size, and the exigencies of researchers supervising collection of data to meet specific research needs. For this reason, each portion of the report delineates specific sample designations used. An indication of the pupil sample population is given in Table ii to acquaint the reader with the approximate sample utilized. The actual sample for each part of the study was in some instances larger and some instances smaller than the sample indicated here. Tables ii, iii, and iv can only be considered rough estimates of the population employed, then, in the various parts of the report.

Table ii  
Indication of Pupil Sample Population

	Girls	Boys	Unknown	Total
Indian Pupils	<u>73</u> /57.03	<u>51</u> /39.84	<u>4</u> / 3.13	<u>128</u> /100.00
Non-Indian Pupils	<u>223</u> /41.45	<u>260</u> /48.33	<u>55</u> /10.22	<u>538</u> /100.00
Total	<u>296</u> /44.44	<u>311</u> /46.69	<u>59</u> / 8.87	<u>666</u> /100.00

Table ii reveals 128 Indian pupils and 538 non-Indian pupils, making a total of 666 pupils for the approximate sample.



Table iii reveals sex and age designations: 12 year olds and younger, 13 year olds, and 14 year olds and older, employed in Part I of the study.

Table iii

Sex and Age Designations of  
Approximate Pupil Sample Population

	12 yr. and younger	13 yr.	14 yr. and older	Total
Indian				
Girls	<u>19</u> /26.76	<u>15</u> /21.12	<u>37</u> /52.12	<u>71</u> /100.00
Boys	<u>12</u> /22.64	<u>17</u> /32.08	<u>24</u> /45.28	<u>53</u> /100.00
Non-Indian				
Girls	<u>107</u> /50.95	<u>53</u> /25.24	<u>54</u> /25.71	<u>214</u> /100.00
Boys	<u>106</u> /41.96	<u>69</u> /27.27	<u>78</u> /30.83	<u>253</u> /100.00
Total	<u>244</u> /41.29	<u>154</u> /26.06	<u>193</u> /32.66	<u>591</u> /100.00

Table iv reveals the approximate sample of Indian pupils in Integrated and non-Integrated classrooms.

Table iv

Indian Pupil Approximate Sample  
in  
Integrated and non-Integrated Classrooms

	Girls	Boys	Total
Integrated	<u>25</u> /52.08	<u>23</u> /47.92	<u>48</u> /100.00
Non-Integrated	<u>48</u> /63.16	<u>28</u> /36.84	<u>76</u> /100.00
Total	<u>73</u> /58.87	<u>51</u> /41.13	<u>124</u> /100.00

The classrooms at Crowfoot School, Cluny involved a Grade 5-6 and a Grade 7-8. The Grade 5-6 class included thirty-six Blackfoot Indian children, and the Grade 7-8 included twenty-eight Blackfoot Indian pupils. The Morley classroom, Grade 6-7, included twenty-seven Stony Indian pupils. The integrated classrooms included Stony, Blackfoot, and Sarcee Indian pupils numbering approximately three Indian pupils per twenty-seven non-Indian pupils; (some 11.11% Indian pupil population per classroom and 25.4% of the total population.)

Pupil Entrance and Drop-out Information. Twenty-four teachers reported upon pupils who entered and left their classrooms during each year. Thirty-three Indian children entered these classrooms during the year, of which seven children were transfers from other schools and three were re-entries. Twenty-four non-Indian children entered the classroom during the year, and of these five were transfers from other schools, Appendix I of Part I, pp. 118-119.

The report on pupils leaving the twenty-four classrooms is perhaps more important with regard to differences which seem to exist between Indian and non-Indian pupils. Thirty-six Indian children left the classrooms; nine of these transferred to other schools due to family moves, closing of residential schools, and desires to attend reserve schools. Sixteen appear to have "dropped out" of school, Appendix II of Part I, pp. 120-122. Among the twenty-three non-Indian children who left the classrooms, thirteen transferred because of family moves, and three appear to have "dropped out" of school. When consideration is given to the realization that some 25.4% of the sample were Indian, the difference proportionally between Indian and non-Indian pupil dropouts assumes more significance.<sup>11</sup> In the twenty-four classrooms reported upon, a drop-out ratio of five Indian pupils to one non-Indian pupil existed.

Phases of the Report. In structuring the report, it seemed logical to look at pupils' perceptions of morale, social achievement, and teaching dimensions first to gain a preliminary view of the classroom climate. Part I, then, deals with these elements of pupil interperson-perceptions. Part II gives understandings of value orientations of pupils, parents, and teachers tested. Part III develops insights into social climates of the classrooms, i.e. of the pupils' places in classroom group structures and their interactions. Part IV is a report upon the intelligence, aptitudes, and academic achievement of the pupils. Part V provides pupil aspirations and concepts of reality. The conclusion again considers the model of self-identification and solidarity elements as outcomes of the research. It is to the task of discovering practical intercultural education processes that this research is dedicated.

Questions which the parts of the report will attempt to answer include:

- Part I     - What similarities and differences of perception exist for Indian and non-Indian pupils in regards to their learning morale, perceived social achievement, and teaching dimensions of learning behavior?
- Part II    - To what extent do values of teachers and Indian and non-Indian pupils agree or disagree? What effects do these have upon the teaching-learning climate of the classroom?
- Part III   - How do Indian and non-Indian pupils' group structures and interactions appear to be similar? In what ways do they differ?
- Part IV    - What import for teaching and learning exists in intelligence, aptitude, and academic achievement likenesses and differences of Indian and non-Indian pupils?
- Part V     - What implications for learning exist in Indian and non-Indian pupil aspirations and concepts of reality?



Conclusion - How may the foregoing be considered in relation to the preliminary models of self identification and solidarity presented in the Introduction to the advantage of better educational procedures in dealing with Indian and non-Indian pupils?

Louise C. Lyon  
John W. Friesen  
Walter R. Unruh  
Raymond L. Hertzog

1970

## REFERENCES

<sup>1</sup>S. N. Eisenstadt, From Generation to Generation. N.Y. The Free Press of Glencoe, Collier-Macmillan Ltd., 1956., p. 43.

<sup>2</sup>Attention is called to Harry F. Wolcott's A Kwakiutl Village and School. N.Y. Holt, Rinehart and Winston, 1967. Also see H. B. Hawthorn (ed.), A Survey of the Contemporary Indians of Canada: Economic, Political, Education Needs and Policies, Vol. I and II, Ottawa: Queen's Printer, 1966; Henry Zentner, The Pre-Neolithic Ethic: Avenue or Barrier to Assimilation, Calgary: University of Alberta at Calgary, 1964; Murray Wax, et. al., Formal Education in an American Indian Community - A Society for the Study of Social Problems Monograph, Vol. II, No. 4, Spring, 1964; and Henry B. Burger, Ethno-Pedagogy: A Manual in Cultural Sensitivity with Techniques for Improving Cross-Cultural Teaching by Fitting Ethnic Patterns, Albuquerque: Southwest Cooperative Educational Laboratory, 1968.

<sup>3</sup>Specific titles for the hypothesized Indian vs. non-Indian interperson-perceptions are drawn from the descriptive designations expressed by the twenty-three teachers for Indian and non-Indian pupils (Appendix III-1, Part I, pp. 124,125); however supportive comparative research of Indian and non-Indian pupils is available. See Reference 2 above.

A study by Gage, Leavitt and Stone revealed that teachers who were able to predict cognitive, social and emotional characteristics of their students were in practice more effective in dealing with their students. See N.L. Gage, G.S. Leavitt and G.C. Stone, "Teachers' Understanding of Their Pupils and Pupils' Ratings of their Teachers," Psychological Monograph on Teaching. Chicago: Rank McNally and Company, 1963, pp. 478-479. Such research seems to give support to a conjecture that the descriptive designations of pupils made as a preliminary survey of the twenty-three teachers in the present study may possibly be predictive elements for examining Indian and Non-Indian Interperson-Perceptions as polar opposites.

<sup>4</sup>C. Wayne Gordon sees status seeking by students within even a like socio-economic or social class educational setting as being inducements towards a sense of power and source of conflict towards dimensions of teaching behavior. See C. Wayne Gordon, "The Role of the Teacher in the Social Structure of the High School." Journal of Educational Sociology, Vol. 29, 1955, pp. 21-29.

<sup>5</sup>H. B. Hawthorn, op. cit. p 16, recommends that "the Indian Affairs Branch remove all group psychological tests such as IQ and aptitude tests from the schools and that public schools be urged to do likewise." This recommendation was made with the suggestion that such tests are "neither valid nor reliable for Indian students."

The present research has endeavored to consider cultural difference in selection of testing instruments in recognition of this recommendation.

<sup>6</sup>Zentner provides a comparison of the Protestant Ethic orientations of the non-Indian with the nature oriented sanctions which Athabaskan Indian people endorse. See Henry Zentner, op. cit.

<sup>7</sup>The "Free Response Inventory" was drawn from a similar one used for Summer Institutes for Teachers of Disadvantaged Children, the University of Texas Hogg Foundation for Mental Health Contract IAC-(66-67)-200 with the Texas Education Agency, 1966. See Appendix III-i, pp. 124,125, Part I.

<sup>8</sup>Joan Ryan in Chapter IV, pp. 112-114, H.B. Hawthorn (ed.) op. cit. provides indexes of differences in psychological factors affecting socialization of Indian and non-Indian children. These behavioral conditioning practices seem to bear relationships to the teacher adjective remarks expressed in that given such differences in family background psychological sets, just such differences in activity-orientations for non-Indian children and reserved, shy, withdrawn-orientations for Indian children could result.

In addition, Murray Wax, et. al., op. cit., refers to behavioral characteristics of Indian pupils which are supportive of the characteristics endorsed by the twenty-three teachers of the present study.

<sup>9</sup>H. B. Hawthorn, op. cit., Vol. II, p. 7.

<sup>10</sup>See Louise C. Lyon and John W. Friesen, Culture Change and Education: A Study of Indian and Non-Indian Views in Southern Alberta. N.Y.: Selected Academic Readings, 1969, for a background review of the bands surrounding the city of Calgary, Alberta. Included are the Algonkian speaking Blackfoot, Blood and Peigan; the Assiniboine Stony Indians; and a Woodland Beaver tribe, the Sarcee.

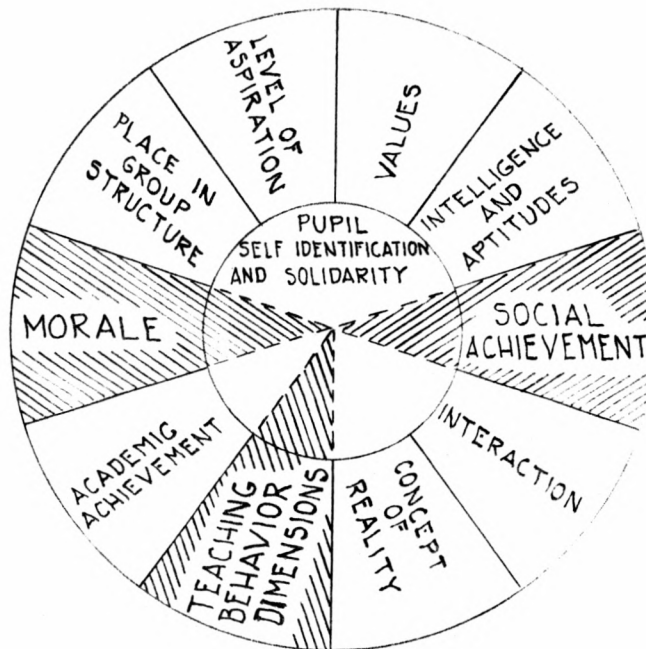
<sup>11</sup>Progress of students through a twelve-year school cycle is reported upon for 8782 Canadian Indian students in H. B. Hawthorn's A Survey of the Contemporary Indians of Canada, Vol. II, op. cit. p. 130. Out of the 8782 Indian students, 8441 did not complete high school.

Part I

Pupil Interperson-Perceptions of Morale, Social  
Achievement and Teaching Dimensions

Louise C. Lyon

Department of Educational Foundations





## Part I

### PUPIL INTERPERSON-PERCEPTIONS OF MORALE, SOCIAL ACHIEVEMENT AND TEACHING DIMENSIONS RECOMMENDATIONS

#### GENERAL RECOMMENDATIONS:

1. Training of native teachers should take priority in educational plans for the future. Native educational professionals will allow native pupils to have ethnic adult models from which to make better self-identifications in the learning process.
2. In-service training of non-native teachers with native teachers should be effected to insure cross-cultural understandings. Non-native teachers can gain insights into "consummatory-affectivity" orientations which Indian pupils seem to hold, and native teachers may strengthen their understandings of "work-success" orientations which seem to motivate non-Indian pupils.
3. Integrated classroom climates should be encouraged to insure more inculcations of "work-success" which may help to promote better achievement for Indian pupils. Such integrated classrooms may occur either on or off reserves.
4. Teachers in integrated classroom situations should receive special helps with which to work with native children. Such helps should include native teacher aides, learning materials which give positive emphasis to native cultures, and counselling aid to improve trans-cultural perceptions of pupils where needed.
5. Integrated classroom projects should be carefully assessed to view the best kinds of helps for native pupils' morale and social achievements.
6. Teachers dealing with both Indian and non-Indian pupils need to better understand the importance of expressive-helping dimensions of teaching behavior, and of integrative task and small group practices.
7. More family involvement in the school as an institution is needed for both Indian and non-Indian pupils to insure positive pupil concepts of: parental support, self identification, and academic achievement.
8. Concern by school staffs for pupil self perceptions and expressiveness seems a needed element for both Indian and non-Indian education.
9. Learning motivation revitalization which allows for pupil participations in planning and evaluations of classwork should become a stronger element in classroom activities.

RECOMMENDATIONS FOR TEACHERS REGARDING BOTH INDIAN AND  
NON-INDIAN PUPILS:

1. Expressive teaching dimensions of behavior need reinforcement by teachers to encourage pupil endorsements of teacher guidance.
2. Authoritarian requirements regarding planning and execution of classwork need better explanations made by teachers to allow better pupil understandings of the necessity of such action.
3. Task assignments and expectations regarding tasks should be clearly indicated by teachers, with a willingness to explain new work "more than one way" if pupils require such explanation.
4. Small group work should be provided for by teachers, wherever possible, with consideration given to pupils for "how" the work will be accomplished.
5. Pupil classwork and homework learning participations with peers should receive greater emphasis as learning procedures.

SPECIAL RECOMMENDATIONS TO TEACHERS REGARDING INDIAN PUPILS:

1. Provide "helping-liking" supports for Indian pupils, because integrative self-to-others concepts seem to be their means of perceiving "the social world".
2. Consider the importance of Indian pupils learning the facts, yet show that "you" care about how they feel.
3. Provide for review of work for Indian pupils and use of work again after it is learned so that it is meaningful, and help pupils not only with school work but "anything needed".
4. Give Indian pupils clear indications of "how" work is wrong in marking papers.
5. Provide for more learning instances where a native child can have the privilege of working and learning not only with non-native but with native peers.

The pupil who is well identified with his social group, who has solid social relationships, will tend to progress in a learning situation without being hampered by cognitive and emotional distractions. Such a pupil should have good morale, should perceive his social achievement as being stable, and should look upon his teacher without too much resentment or resentment<sup>1</sup>; in other words he is balanced with respect to his world. That this world is a world of learning, which should have its "ups and downs" as concepts are coped with and mastered, is predictable. Living creatures seem to experience frustration when blocked in many kinds of behavior progressions of which learning is an integral part. Human beings, since they are social beings seeking relationships with others, may be expected to react to learning climates with social reactions. This portion of the study seeks pupil perceptions as indexes of their social reactions in answer to the question:

"What similarities and differences of perception exist for Indian and non-Indian pupils in regards to their learning morale, perceived social achievement, and teaching dimensions of learning behavior?"

When an individual can adjust his frustrations by rational interdependencies with others, morale may be high. When avenues of primary group reinforcement are available and an individual can look to those closest to him for reinforcements, he may be said to have morale stabilization. Morale solidarity is actually a balanced psycho-social condition wherein the individual is able to cope with frustrations evidenced from difficult coping situations. In the classroom, morale is high when pupils and teacher give reward and reinforcement to an individual for learned behaviors. A positive self identification is the result. The pupil is then said to have positive psycho-social coping ability. Average morale differentials for pupils of varying cultures should provide a means for observing group morale descriptions.

A person's social achievement is a measure of his ability to relate to others within his group. What seems of greater significance, especially to the learner, is the way he perceives his social achievement. Only when the learner sees his perceived social achievement as being "normal," does he express "good" social relational tone. In a classroom, the pupil's social achievement focus is upon his "self," "significant others," and "learning." The pupil's perception of these provides his perceived social achievement index. The average of "like" perceptual variables for pupils of varying cultural backgrounds should produce differences and similarities which may exist between selected groups.

When pupils enjoy morale solidarity and good social relational tone, their measurement of dimensions of teaching behaviors encountered should be "normal" perceptual definitions of the way they perceive instructional modes. The teacher is seen to be adequately



authoritarian about support of rules and directive in assignments, warm and expressive in support of the pupil as an individual learner, and task-oriented in structuring positive, stimulating classroom experiences.

### The Indian Pupil

According to Wax and his associates the Indian pupil does not have morale solidarity. The problem lies in the gap which exists between the ways of the school and the ways of the home.

When the Indian child enters school he sees himself as part of a local kin group.... He may love, hate, obey or fight with immediate kin but....they are his folks....<sup>2</sup>

Toward "outsiders" he has no such relationship or responsibilities....<sup>3</sup>

The behavior of Sioux pupils reported upon by the Wax study reveals an increasing gulf between Indian and non-Indian pupils, and between Indian pupils and their teachers. By the Second Grade, the Sioux pupils were having a hard time keeping up. Indian pupils seemed non-aggressive when they first arrived at school, and did very little of what White parents termed "fighting back" when nudged or pinched by their non-Indian peers. The Wax study states, "When a child does desire to attend school, he usually receives whatever moral and financial support his immediate family and kin can provide;" however school is not valued as a means to a better kind of life.<sup>4</sup> The child encountering school is baffled, frustrated, abused by other pupils

for his differences in looks, dress, and ways of behavior. A high school student attempting to attend school in the city was described as being considered a "hick and unsophisticated," by her peers because she could not dress or act like the others.<sup>5</sup> Such a student, rather than staying and finishing high school, usually quits or drops out.

Perceptions of fellow students who evaluated reasons why Indian students did not graduate from high school, given for the six-state region of Oregon, Washington, Idaho, Montana, North Dakota and South Dakota, rated "lack of encouragement at home" the major cause of drop-out from school. What might be regarded as being more indicative of lowered morale indices were the second and third choices: "lack of encouragement from school" and "lack of desire or interest of the individual to continue an education."<sup>6</sup>

Part of the problem of morale stabilization as an Indian pupil progresses is the lack of adult models who have achieved high status. In the early years, if he chooses a non-Indian model, "he has no means of internalizing non-Indian characteristics as he does not have sufficient knowledge of them to be able to behave as a non-Indian in the absence of the model."<sup>7</sup> Since the process of identification with a model and choice of vocational aspiration are closely related, the Indian pupil's later aspiration seems also to be one of conflict.<sup>8</sup>

In perceived social achievement, Wax reports that for an Indian to be regarded as a "good Sioux," he must act as one. For example, he must "help people" and "talk to people." "Such men are usually

pictured as wise, considerate, experienced, and past their first youth...."<sup>9</sup> This could be considered the "ideal" Sioux perceived social achievement. Unfortunately helpfulness to others seems less a major criterion for social success among non-Indians, who instead tend to place sophistication of speech, dress, and mores -- the "in" ways of behavior, as being more important measurements for social accomplishment.

The problem of the teacher and teaching dimensions of behavior may also fall within the area of problem relationships. The Wax study found no White teacher "who had country Indian friends and only one -- an unusual, elderly woman of modest rank....had taken the trouble to become acquainted with their ways...."<sup>10</sup> Her motive was to be a better teacher for her Indian pupils. When adults -- Indians or Whites -- do not reach or bridge to the children's peer group to aid informal organization, the supportive socio-emotional teacher warmth which structures ease of learning probably is non-existent. In such instances, social rewards of teacher approval and peer approval are lacking and learning is no challenge, no matter how curious a child may be.

Perhaps one of the more interesting findings regarding Indian pupils and their perceptions of teacher behavior also revealed by the Wax study, was that of the Sioux idea of "competition" being centred about the learning relationship between teacher and pupils and not as a contest between pupil peers. "Competition" to the Sioux meant an attitude toward scholarly work. The teacher who made the

pupils perform by demanding tasks and excellence was considered by the Indians to be inculcating a practical competitive striving."

....When I was in school, in the Fifth Grade, I think, I had a teacher who influenced all my further studying. She wasn't exactly mean but she made us work very hard. When she said to do fifty problems, we did fifty problems and no fooling around! She gave me a sense of sticking with a difficult task until it's finished that has stayed with me the rest of my life....<sup>11</sup>

An "affluent Indian rancher"  
quoted from the Wax study.

The model dimension of teacher behavior endorsed by the Sioux apparently is one of authority-orientation.

The aforementioned are some of the relevancies known in regard to the Indian pupil's morale, perceived social achievement, and teaching behavior reactions. These are indications of a very different reference set of perceptions for Indian pupils from those usually attributed to White pupils regarding the formal learning situation. What appears to be tragic is the concept that parental ways of behavior do not endorse a closing of the cultural gap. Differences, frustrations, disenchantments, and alienations may be culturally self-perpetuating for a cultural group to the point of hostile socialization practices being endorsed both formally and informally toward school.<sup>12</sup>

#### The Non-Indian Pupil

It may be contended that the non-Indian pupil has just as many problems of morale, perceived social achievement, and hostilities towards teaching dimensions of behavior as does the Indian pupil,



but their problems are of different kinds. Some contend it is the "generation gap" which induces a special kind of rebellion of youth today against all the traditional "Protestant Ethic" ways of behavior.<sup>13</sup> Others see it as the teachers' fault because of their "ivory tower" teaching approaches.<sup>14</sup> Parents are blamed for "not practicing what they preach."<sup>15</sup> The problems seem to mount with definitions of pupil resentment, resentment,<sup>16</sup> and commitment and uncommitment.<sup>17</sup>

Morale seems to be tied up with complex struggles of non-Indian pupils to keep a flexible, adaptable psychological and social outlook in the face of ever-increasing changes which characterize our society.<sup>18</sup> The uncertainty of the future is drummed into the consciousness from every media source, and the important way to maintain a morale equilibrium seems to be the ability to catch ahold of the ever-present now and expand it, so that intensification of the reality of "now" can happen cognitively, emotionally and physically. In this way, the individual knows he counts and that something is stable. Morale for the non-Indian pupil is a search for equilibrium stabilization and solidarity.

Perceived social achievement today is a matter of academic study "wrapped up" with communication ability<sup>19</sup> and personal influence.<sup>20</sup> Youth are becoming aware of the power of interaction ability in social achievement. An example of this is their "compressed speech" which seems a mechanical condensation of the spoken word attempted in ordinary conversation. It seems not the content of what is said that implements

social achievement so much as the speed, inflection and adroit use of wit and irony, spiced with the latest "in-words". Dress, fads, and the captivated mind help. Perhaps the youth of today is more objective in perceptions of self and others than is an adult. Fromm defines the ability to be objective as being possible "only if we respect the things we observe; that is, if we are capable of seeing them in their uniqueness and their interconnectedness."<sup>21</sup> In the cult of the present, worshipped by the non-Indian young person of the present day, an all-observable unique and interconnected "now" predominates. The power of being "other-directed"<sup>22</sup> (by peer, not adult model figures) is so great that the young individual's problem seems not to be so much relating to others, but in discovering himself.

Coleman sees the teacher in a new teaching dimension task brought on by the collective young. Where traditionally, in the past, schools have been used to mold children as individuals toward ends which adults dictated, the emerging pattern today must be a change, that of molding social communities as communities so that the norms of the communities themselves reinforce education goals rather than inhibit them.<sup>23</sup> This kind of teaching behavior calls for a change in orientation from authoritarian, traditional classroom direction to functional, socio-emotionally supportive learning guidance. Until teachers learn such teaching behaviors, conflict between teachers and pupils may continue to be the mode of classroom climates. Such teaching behavior seems a long way from the authoritative figure admired by Sioux pupils and their parents.

Just what the non-Indian pupil sees his morale and perceived social

achievement to be as a result of popularization of his academic revolution is problematic. His perceptions of teaching dimensions, it might be predicted, would be biased, perhaps, by demands for autonomy and socio-emotional support as "idealized" rubrics of measurement.

#### The Indian and the Non-Indian Pupil

If these indications of Indian and non-Indian pupil descriptions are at all predictive, their differences in perceptions of morale, perceived social achievement concepts, and teaching behaviors are indeed separative. It could be hypothesized that:

- i) In morale perceptions, the Indian pupil seems to be in conflict with non-Indian pupil peers and non-Indian school and teaching practices.

The non-Indian pupil apparently also has morale disequilibrium, but of a different variety. His appears to be a search away from traditional approaches to life, a search for individuality. This kind of search is highly endorsed by peer morale supports.

- ii) In perceived social achievement, the Indian pupil may be hampered in attempting to learn in a non-Indian classroom climate or under non-Indian teaching guidance by his Indian mores of helpfulness, his sharing tendencies, and his self-effacement; mores which for an Indian mean consideration of others.

The non-Indian pupil may suffer from unrealistic perceived social achievement pressures which home and peers demand.

- iii) In perceptions of teaching dimensions of behavior, the Indian pupil may perceive and favor traditional, authority-oriented teaching dimensions supported by socio-emotional understanding.

The non-Indian pupil may perceive teachers to be both traditional and functional, and also favor warm socio-emotional supports.

The research sought similarities and differences in perceptions such as these held by six hundred and sixty-six Indian and non-Indian pupils in twenty-nine classrooms. (See Table ii, page x of Introduction for "Indication of Pupil Sample Population.")

#### Research Instrumentation

Morale perceptions were gained by use of the Gordon-Adler-McNeil scale originally constructed for a Bay City, California study of some 2,700 Grade 6 and 8 pupils and 79 teachers.<sup>24</sup>

The Lyon Perceived Social Achievement Scale was used to measure pupils' perceptions of their social relationships. This scale was used as a portion of a study of 336 Grade 4 - 6 pupils in Oxnard, California. Both English-speaking and Spanish-speaking pupils were included in the Oxnard sample.<sup>25</sup>

The Teaching Dimensions Scale was another portion of the Gordon-Adler-McNeil research.<sup>26</sup>

#### Research Procedures

Because factor analyses of the present research reveal different scale indexes from research conducted previously, designations of the scales as revealed by factor analyses of the present research are presented in all parts of Appendixes IV, V, VI. Interpretations of similarities and differences which exist between the total pupil population and Indian and non-Indian sample populations are presented.<sup>27</sup>

The report is presented in each instance: for morale, perceived social achievement, and pupils' concepts of teaching dimensions, by reporting the analyses of factors for the total group, the Indian pupil sample, and the non-Indian sample. A comparison of content also



is made with the total group analysis as a reference. This was considered to be valid logically, although the total group includes only some 25.4% Indian pupils, because the total group situation is indicative of the overall "social climate" which pupils must encounter and cope with in their socialization process.

#### Pupil Morale Findings

Pupil Morale Median Comparisons. Table I reveals Median Comparative Considerations of the various populations tested relevant to the morale scale disclosed by the Total Sample Factor Analysis. Twenty-nine classrooms consisting of six hundred and seven Indian and non-Indian pupils comprise the Pupil Morale Scale total sample, Appendix IV-i. Because the Morale Questionnaire asked for a choice of one of three responses for each question, the stronger positive response was rated mathematically as "one," the lesser positive response was rated "two," and the negative response was rated "three." This means that the lower the median number in Table I, the more the endorsement of the factor concept. Table I must be considered to be a comparison indicative only of broad differentiations, because further factor analyses did differ with each sample breakdown: i.e. for Indian, Integrated Indian, Non-Integrated Indian, and Non-Indian analyses. (See Appendix IV, pages 128-137 with sample sizes indicated.) The only medians which stand out in Table I are those of the "all" Indian sample and non-integrated Indian sample responses to the Peer Factor set, which they seem to endorse more strongly than the other sample populations; and to the School (As an Institution) Factor Set, which they do not endorse as much as the other sample populations. The Peer Factor Set differences indicate that the Indian sample, and specifically the non-inte-

Table I

Morale Median Comparative Considerations for Total Sample Factor Analysis<sup>28</sup>

	Total Sample	Indian Sample	Integrated Indian Sample	Non-Integrated Indian Sample	Non-Indian Sample
<u>The Teacher</u>	3.250	3.586	3.148	3.583	3.148
<u>Peers</u>	3.214	2.762*	3.348	2.729*	3.348
<u>School (As an Institution)</u>	2.936	3.276*	2.862	3.400*	2.862
<u>School Dropout</u>	2.811	2.894	2.793	2.870	2.793
<u>School Anxiety</u>	2.922	2.712*	2.967	2.787*	2.967

\* Since the Morale Questionnaire asked for a choice of one of three responses and choices were directional from positive to negative, the lower the median, the more the endorsement. This table can only be considered as a broad general indication of comparisons between population samples as further Factor Analyses for the Sample breakdowns reveal complex differentiations.

grated Indian sample, may tend to endorse peer linkages in the classroom more wholeheartedly than do the total population sample, the integrated Indian sample, and the non-Indian sample. On the other hand, these sample populations -- the Indian and non-integrated Indians, seem to endorse the School (As an Institution) less positively than do the total sample, integrated Indian sample, and non-Indian sample populations, probably because they are anxious about school (see their median responses to the School Anxiety Factor Set in relation to the other sample populations). Some struggle on the part of Indian pupils may exist between their endorsements of their peers and anxiety over school, if these broad indications are correct.

Total Sample Population Morale. Appendix IV-i, the Structural Analysis for the Total Sample Morale, provides both Indian and non-Indian pupil designations of: the teacher, peers, the school as an institution, school dropout, and school anxiety. The list of factors is similar to contemporary youth concerns for living and learning that one reads about in the popular literature today.

In morale perceptions of teachers, pupils seem, as a whole, to show respect for and liking of their teachers, although there is some indication of disliking their teachers in Factor Items 20 and 22. When these factors are considered as being positively loaded and their medians weighed in respect to Factor Items 24 and 26, their negation of teacher does not seem to offset the pro-teacher endorsement by the pupils assessed.<sup>29</sup> These children seem to respect and like their teachers. Peer morale, for the group as a whole, is positive and pupils seem to be well adjusted to their classmates.

Morale perceptions of school as an institution seem almost unrealis-

tically supportive of school attendance and liking. These pupils apparently like school. Only when the school dropout factor set and school anxiety factor set are considered do tendencies for pupil disenchantment appear; yet these concepts are not as highly endorsed as are those of the other factor sets. "I would like to drop school now" indicates some endorsement for escape aspirations from learning. The school anxiety set reveals a "getting ahead in school work" focus, yet nervousness about the work and social relations with peers in class. The medians are high in comparison to the medians of the other factor sets indicating that these signs of disenchantment with school may not be as important to pupils as peers, the teacher, and school as an institution.

Although pupils seem to be pleased with their teachers and their peers, their expressions of desire to drop out of school and anxiety about their work and social relations with classmates indicate that not all is "well" with our present schooling practices. The data were probed further to discover particular student sample concepts of morale.

The Indian Pupils' Morale. How do Indian pupils view perceptions of morale? Those in the study seem to be concerned with: liking the teacher, positive approaches to the teacher, peers, school as an institution ambivalences, school involvements, getting ahead in school work, disenchantment with the amount of time spent in school, and school social relational anxiety, Appendix IV-ii.

Table II, which follows deals with Morale Cross-Tabular Factor References for the Total Sample, Indian and Non-Indian Samples. It reveals that, for the most part, Indian pupils seem to endorse morale concepts of the teacher held by the total pupil population. Their perceptions of the teacher, however, focus more upon teacher liking ambivalences



and some concern for long range teacher approaches.

Indian pupil perceptions of their peers also compare well with those of the total population sample with an endorsement of "having many friends in class." Apparently, they also have "a better time at school than at home." (See also Appendix IV-ii.)

The school as an institution is looked upon by Indian pupils with liking, however, there is dislike for doing homework and a desire rather to "go to a show or play with my friends." School involvement and school work seem to be factors also endorsed positively by Indian pupils as a whole. The positive nature of these endorsements makes one wonder how much halo effect existed in the answers the children gave, -- "Were they trying to give the teacher answers they thought the teacher wanted?"

Only in the school disenchantment and school social relations' anxiety factors do the native children's problems begin to appear. These factors which bear high factor loadings, .832 and .812 respectively, indicate that Indian pupils do have some sense of time boredom with their learning task and anxiety about the way they get along with other members of the class.

Because the Indian factor analysis did not differ greatly from that of the total sample analysis, a breakdown of the Indian sample into Indian pupils in integrated and non-integrated classroom designations was made and factor analyses of these designations were conducted.

Table II

Morale Cross-Tabular Factor References for Total Sample, Indian and Non-Indian Samples

Total Sample Factors	Indian Factors	Non-Indian Factors
<p><u>The Teacher</u> Items 21,19,25,22,20 24,23,26 <u>Focus</u>: Teacher esteem and liking for most part; however Items 22 and 20 indicate rejection of teacher.</p>	<p><u>The Teacher</u> Items 19,22,21,20,25 Factor items are in <u>agreement</u>* with Total Sample, but agree with only Items 25 and 21 of Non-Indian Sample. <u>Focus</u>: Teacher liking ambivalence. Items 22 and 20 are teacher rejection.</p> <p><u>Teacher Approaches</u> Items 24,23,26 Factor Items are in <u>agreement</u> with Total Sample positive perceptions of teacher. The items are in <u>agreement</u> with non-Indian "The Teacher" items. <u>Focus</u>: Long range teacher liking relations.</p>	<p><u>The Teacher</u> Items 25,24,21,26,23 Factor items are in <u>agreement</u>* with Total Sample, but agree with only Items 25 and 21 of Indian sample. <u>Focus</u>: Teacher liking and teacher esteem (Positive). <u>Teacher-School Ambivalence</u> Items 22,06,20,03,04,01,19,02 Factor items 22 and 19 agree with Total Sample and Indian "The Teacher" sample. Items 06,03,04,01,02 <u>do not agree</u> with either Total or Indian samples and are ambivalent about liking school. <u>Focus</u>: Teacher-school liking-disliking ambivalences.</p>

\*Agreement considerations involve like endorsement of Items.

Table II-ii

Morale Cross-Tabular Factor References for Total Sample, Indian and Non-Indian Samples

Total Sample Factors	Indian Factors	Non-Indian Factors
<u>Peers</u> Items 14,15,18,17 <u>Focus: Pro-Classmate perceptions.</u>	<u>Peers</u> Items 14,04 Factor Items show <u>some agreement</u> with Total and Non-Indian samples <u>Focus: Class Friendships.</u>	<u>Peers</u> Items 17,14,16 Factor items show <u>some agreement</u> with Total and Indian samples; however Item 16 reveals some social problems with classmates. <u>Focus: Classmate working-liking-social relation ambivalences.</u>
<u>School (As an Institution)</u> Items 10,02,07,01,05 <u>Focus: Pro-school attendance concepts.</u>	<u>School (As an Institution)</u> Items 01,07,02,13 Factor items show <u>some agreement</u> with Total Sample, <u>no agreement</u> with non-Indian sample. <u>Focus: Pro-school inclinations; however dislike of homework.</u> <u>School Involvement</u> Items 15,05,08 <u>Some factor item agreement, i.e. Factor 05, with Total and Non-Indian Samples.</u> <u>Focus: Pro-school involvement</u>	<u>Pro-School (As an Institution) Inclination</u> Item 10 Factor item is in <u>agreement</u> with first factor of Total Sample. <u>no agreement</u> with Indian Sample. <u>Focus: Pro-school inclinations following a holiday.</u> <u>School Involvement Ambivalences</u> Items 07,05,13 <u>Some factor item agreement, i.e. Factor 05, with Total and Indian samples.</u> <u>Focus: Pro-school involvement; however dislike of homework.</u>

Table II-iii

Morale Cross-Tabular Factor References for Total Sample, Indian and Non-Indian Samples

Total Sample Factors	Indian Factors	Non-Indian Factors
	<u>School Work</u> Item 11 <u>Some factor agreement</u> with non-Indian sample. <u>Focus:</u> Getting ahead.	<u>School Work Anxiety</u> Items 09, 11 <u>Some factor agreement</u> with Indian sample. <u>Focus:</u> Anxiety over school work accomplishment.
<u>School Dropout</u> Items 06, 03, 12 <u>Focus:</u> School dropout and disenchantment interests.	<u>School Disenchantment</u> Item 12 <u>Agreement</u> with Non-Indian sample. <u>Focus:</u> Time and boredom.	<u>School Disenchantment</u> Item 12 <u>Agreement</u> with Indian sample. <u>Focus:</u> Time and boredom.
<u>School Anxiety</u> Items 11, 09, 16 <u>Focus:</u> Apprehension re "getting ahead in school work."	<u>School Social Relations Anxiety</u> Item 16 <u>No agreement</u> with Total Sample; however this factor does relate to non-Indian "Peer" factor. <u>Focus:</u> Social relation anxiety.	

Comparison of Indian Pupil Morale in Integrated and Non-Integrated Classrooms. Indian pupils in integrated classrooms seem to be inclined to morale ambivalences regarding their social and institutional concepts of school. Even their concepts of "The Teacher," the first three factor sets of Appendix IV-iii, reveal frustration. In the first factor set of Appendix IV-ii, the children seem concerned with pleasing the teacher (Factor Item 26), and desire to "keep in touch with this teacher after leaving this class." They have respect for and like the teacher in the second and third sets entitled, "The Teacher-School-Peer Ambivalences" and "Peers-School-Teacher Ambivalences;" however they express both "teacher liking" (Factor 19) and "teacher disliking" (Factor 22), and admit to schoolwork - neighborhood friend ambivalences. (Also see Table III, pages 23 and 24.)

They like being with their friends in class, the third factor set; however they would like to drop school now or miss school; and when the median scores are considered, they are not quite sure about liking school better than most pupils their age. Apparently they believe class members are friendly, they want to get back to school after a holiday, and they have a better time at school than at home, concepts which only reinforce their "see-sawing" morale inclinations.

As far as the school as an institution is concerned, they reinforce the idea of getting back to school after a vacation, but they hold some dropout thoughts and negative teacher perceptions. Their school work makes them nervous although they seem to like it. They admit to time disenchantment with school and endorsement of "if I were teacher of this class, I would do things pretty much the way



my teacher does them."

The ambivalences cited point to a complicated, unhappy, frustrated morale condition of Indian children in integrated classrooms. There is perhaps no more unhappy state than that of being "low man on the totem pole," and considering the average number of Indian pupils per integrated classroom population, these children are certainly in this category where numbers may mean strength in terms of peer perceptions. It will be recalled that the Indian pupils numbered approximately three per twenty-seven non-Indian pupils in integrated classroom situations in these study findings. (See Introduction to this study, page xii.) One is reminded of Gouldner's findings re "the Outsiders" on the staff of Co-op College. If college faculty designated as being outsiders have "relatively little integration in either the formal or informal structure of the organization, .... and are not close to students or faculty members"<sup>30</sup> how can these children feel identification with others in their learning environment?

The pro-school perceptions of the "School as an Institution -- Dropout Ambivalence" factor set may be genuine conflict in attitudes about school and life outside of school which awaits them at age sixteen when Public School Acts permit them to terminate school attendance.<sup>31</sup> Indian students seem to drop out of school at sixteen years of age, if not before. "Most continue on to grade eight but then do not want to continue because they are discouraged and feel 'silly' with the younger kids.'" Many do not want to try to succeed in the social atmosphere of integrated high schools.

Indian pupils in non-integrated classrooms also reveal ambivalence, anxiety, and disenchantment; however, they do express two positive

factor sets: the "Pro-school as an Institution" and "Pro-school as an Institution - Teacher" factor sets. (See Appendix IV-iv.) Item numbers 15, 14, and 10 of Pro-school as an Institution set are definitely pro-school expressions. When compared with the integrated Indians' factor set entitled "School (As an Institution) - Dropout Ambivalences" (Table III), the positive nature of the non-integrated pupils' perceptions becomes even more interesting. Where the integrated Indian pupil rejects school and wants to drop out, the non-integrated Indian pupil likes being with class members, having friends in class, and wants to get back to school to learn after a holiday. Furthermore, the non-integrated factor set entitled "Pro-school (As an Institution) - Teacher," composed of Factor Items 05, 21, 08, reinforces this school liking by non-integrated Indian pupils revealing that the children like school better this year than last year, admire their "good" teacher, and like doing their school work.

If the first factor set (Appendix IV-iv) is considered, Indian pupils in non-integrated classrooms, are similar to those in integrated classrooms, in wanting to please their teachers; their teacher concepts are pro-teacher with the only exception being not liking homework. The second factor set, however, seems to refute the first, showing teacher disliking as well as liking and the desire to drop school even though or perhaps because classmates are friendly. The third factor set, Peer Relations, indicates some problems regarding peer social relations. These may be brought about because Indian mores regarding early maturity rights and privileges, while reinforcing to peer linkages, do seem to cut across teacher and school work liking orientations.

School work, the sixth factor set, is a source of anxiety and

frustration over homework. The last factor set, that of School Disenchantment, seems a wistful ending to what appears to be a struggle between teacher expectations and native mores: although time passes slowly in school, these children in non-integrated classrooms like to work with their classmates. School, then, has some appeal: one's friends are there.

Table III

Morale Cross-Tabular Factor References for Integrated and Non-Integrated Indian Classrooms

Integrated Indian Sample Factors	Non-Integrated Indian Sample Factors
<u>The Teacher</u> Items 24,26 <u>Focus:</u> Pro-teacher inclinations <u>The Teacher-School-Peer Ambivalences</u> Items 21,25,05,11,13,22 <u>Focus:</u> Teacher perception ambivalences, Schoolwork-neighborhood-friend ambivalences.	<u>Pro-Teacher-School Ambivalences</u> Items 26,24,25,07,13 <u>Some content agreement*</u> with Integrated sample; however Items 25,07,13 reveal some teacher-school-neighborhood-friend ambivalences. <u>Focus:</u> Ambivalences.
<u>Peers-School-Teacher Ambivalences</u> Items 15,17,06,19,01,03 <u>Focus:</u> Peer-School ambivalences, Pro-teacher liking expression.	<u>Teacher-School Ambivalences</u> Items 20,22,19,06,18,01 <u>Only content agreement with Integrated classrooms is Item 22, "teacher dislike."</u> <u>Focus:</u> Teacher-liking ambivalences, school-peers ambivalences.
<u>Peers-School Ambivalences</u> Items 18,10,04,14 <u>Focus:</u> School-peer ambivalences.	<u>Peers</u> Item 16 <u>No agreement</u> with Integrated classrooms. <u>Focus:</u> Social relations anxiety.
	<u>Pro-school (As an Institution)</u> Items 15,14,10 <u>Some content agreement</u> with Integrated Peers-School-Teacher ambivalences (Item 15). <u>No agreement</u> with Integrated School (As an Institution) - Dropout ambivalences. <u>Focus:</u> Pro-school expressions.

\*Agreement considerations involve like endorsements of Items.

Table III-ii

## Morale Cross-Tabular Factor References for Integrated and Non-Integrated Indian Classrooms

Integrated Indian Sample Factors	Non-Integrated Indian Sample Factors
<u>School (As an Institution) - Dropout Ambivalences</u> Items 07,06,20,01 <u>Focus:</u> School perceptions ambivalences, Teacher rejection.	<u>Pro-school (As an Institution) -Teacher</u> Items 05,21,08 No agreement with Integrated school (As an Institution)- Dropout Ambivalences. Some content agreement with integrated School Work Ambivalences (Items 08) and Integrated The Teacher-School-Peers Ambivalences. (Items 05 and 21). <u>Focus:</u> Pro-school-teacher expressions.
<u>School Work Ambivalences</u> Items 09,08 <u>Focus:</u> School work anxiety, yet liking ambivalences.	<u>School Work Anxiety</u> Items 09,13 Some content agreement with Integrated School Work Ambivalences (Item 09). <u>Focus:</u> School work concerns and homework rejection.
<u>School Disenchantment - Pro-Teacher Ambivalences</u> Items 12,23 <u>Focus:</u> Time-teacher role concerns.	<u>School Disenchantment</u> Items 12,17 Some content agreement with Integrated School Disenchantment-Pro-Teacher Ambivalences (Item 12). <u>Focus:</u> Time-peer liking concerns.



The comparison of Indian pupil morale in integrated and non-integrated classrooms provides a gloomy picture of the native child in integrated classroom situations. Frustrated, anxious and ambivalent, this child seeks something more than an "outsider" status. Although the picture is somewhat better in non-integrated classrooms, one must consider that in such situations the child is not the outsider, the teacher is. The morale designations point to the frustrated child in integrated school situations, -- and perhaps the frustrated teacher in non-integrated classrooms. In the integrated classroom, the native child's morale is a constant bifurcation. In the non-integrated classroom, his morale perceptions fight between peer linkage approval and desires to please the teacher.

If Indian children are to be placed in integrated school situations, the findings point to a fair percentage of their native peers being present. It is recommended that at least thirty per cent of the class should be Indian. Morale identifications of individual pupils with others of their own background should then become more positive. Native teachers in such classroom situations may help to bridge pupil identification focus so that it may be more positively oriented to learning. Even in non-integrated classrooms, the native teacher is needed, but here perhaps for another reason: to provide an understanding force to cut across peer disorientations to learning and remind the native pupils that learning holds rewards, which perhaps mores and peer linkages cannot give.

Non-Indian Pupils' Morale. Appendix IV-v provides a view of the morale perceptions of non-Indian pupils. These pupils endorse the

teacher through esteem and liking, Factor Set I, on the one hand; and deny the teacher and school with teacher-school ambivalences in Factor Set II. Somewhat like the Indian pupil in integrated classrooms, the non-Indian pupil approves the teacher with liking and then turns about and expresses disliking. Peers, the third factor set, seem to be the positive orientations for non-Indian pupils, and it may be they are so concerned, they worry about getting along with members of their class.

The fourth and fifth factor sets reveal that they have pro-school as an institution inclinations; however, they don't like homework, either -- which seems a normal childhood reaction; after school, the child does want to play. There is school work anxiety, the sixth factor set, in that such work makes these pupils nervous; and in the last factor set, these pupils also are disenchanted with time passing slowly in class.

The non-Indian pupil does not seem to have school as an institution -- dropout ambivalences such as the Indian pupil in integrated classrooms; rather his school as an institution perceptions are pro-school oriented somewhat like Indian pupils in non-integrated classrooms. The difference seems to lie in the nature of their school work anxieties. The non-Indian pupil has a definite Protestant-work-success or "getting ahead" orientation in his anxiety over school work, while the Indian child in non-integrated classrooms reacts with not only nervousness but dislike of homework.

The non-Indian pupil analysis resembles the total pupil analysis,

which might be expected with the larger number of non-Indian pupil representation in the sample. It cannot be contended that the non-Indian pupil reveals a "wholesome, happy" morale structure; rather the analysis provides some cause for concern about these pupils' pro and anti teacher and school ambivalences as well.

Hypothesis One is disproved in regard to Indian pupils' morale. They do seem to be in conflict with school and teacher-liking-disliking; however there was more endorsement of the peer factor in integrated classrooms than in non-integrated classrooms.

The non-Indian pupils' morale hypothesis also is partially disproved, in that these pupils seem to be frustrated in their morale attempts to identify with, not move away from traditional teacher, school, and major societal Protestant ethic expectations, while maintaining rich peer relationships which may demand new fads or ways of behavior.

#### Perceived Social Achievement

Total Sample Population Perceived Social Achievement. Twenty-nine classrooms of six hundred forty-eight Indian and non-Indian pupils provide the "Total Sample Structural Analysis -- Perceived Social Achievement," Appendix V-i. The total sample reveals pupil concerns regarding perceptions of social accomplishment. These include: self expressive-ness; self-perception; family as significant others; neighborhood friends as significant others; and learning orientations involving others,

self-others; and particular learning relevances.<sup>32</sup>

In social achievement perceptions of self, the pupils, as a whole, see themselves talking with their friends who live nearby about schoolwork and time-task requirements such as getting to school or class on time. In relations with family, they are impressed with family success, family affection for self, and doing things and going places with their families. Neighborhood friends hold interest for them. They are concerned with whether or not these friends like them, do things with them; and they even are interested in getting jobs well done with them. The latter seems another Protestant ethic endorsement as does that of family success.

In respect to learning orientations and PSA, the pupils seem to be other-directed about feelings regarding going to school, learning good English, and learning in school.<sup>33</sup> They are, however, self-other (self to others) oriented in their concerns about classmates' esteem for "being considered smart," taking part in peer decision-making, and being liked by classmates.

Other particular learning relevances center about whether or not classmates help them with homework, studying and learning. From this last factor set, one can gather that the pupils would like homework help and class help when consideration is given to the negatively loaded factor items and higher median scores; i.e., when factor items are loaded negatively and test items are positive in direction, the higher the median scores, the more the endorsement of the factor items in question. Median scores for the total sample PSA structural analysis

ranged from 1.073 to 2.357.

An interesting observation can be made with regard to these factor set divisions. Pupils, as a whole, seem to be more concerned about others and learning than they are about themselves. This focus seems to be one that is encouraged by ethical considerations of the proper kind of behavior, by the larger society -- an indication of greater respect for others than for oneself expected in our lives. On the one hand, while we seem to be inculcating an "others' orientation and abdication of self" in our socialization practices; on the other, we are presenting pupils with drives for individual accomplishment in studying, learning and homework expectations. No conclusion can be drawn here that the pupils lack sufficient self identity, although some indication is apparent that concern about "self to others" relationships are involved with whether one is esteemed, whether one has a part in decision-making with peers, and whether one is liked by them.

From the foregoing, it could be conceived that Indian pupils are up against an interesting paradox in attempting to learn the ways of behavior which are endorsed by the larger society. They must gain a clear conception of our socialization endorsements in order to succeed; i.e., that we honor other-directedness and encourage it in our young, even to the point of training them in bureaucratic group practices and subjection of self to group decisions; yet, we demand exemplification of individual accomplishment of our children so that they may "stand out from the crowd."



For the Indian child, such social endorsements must indeed be baffling. One might contend that Indian ways of life also have endorsed tribal other-directedness and individual accomplishment of brave deeds. However, the onus in Indian societies has been upon the honor of communal life for the good of the many, not a complex, competitive, bureaucratic power struggle endorsing subjection of self to group decisions for self-seeking rewards. Indian ways did endorse brave deed accomplishment; these and the respect shown for other types of "self-activity" orientations were privileges granted by others. They encompassed a respect for the need for silence and activity away from the group, and involved band approval for the individual who sought totemic identity or enemies of the tribe. The focus was not upon expectations for individuality or self-aggrandizement apart from the group, but for individuality within the group with the warm comfort of knowing such individuality was respected because people as members of the extended family were regarded as being extensions of one's self.

How Indian and non-Indian children relate to the perceived social achievement orientations of the total group is shown in Table IV. This analysis, like that of the Median Comparative Considerations, Table I, can be considered only in the most general terms because the different groups of children responded in varying ways to particular Perceived Social Achievement questions. The analysis does point to some differences which are apparent when one

Table IV

Perceived Social Achievement Median Comparative Considerations for Total Sample Factor Analysis

Total Sample	Indian Sample	Integrated Indian Sample	Non-Integrated Indian Sample	Non-Indian Sample
Self Expressiveness 2.937	2.779	2.826	2.756	2.966
Self Perception 2.933	2.460	2.659	2.343	2.994
Significant Others: Family 2.574	3.011*	3.028*	3.000*	2.468
Significant Others: Neighborhood Friends 2.922	3.013	3.000	3.023.	2.900
Learning-Others: Orientation: 2.902	2.221	2.476	2.087	3.023
Learning-Self-Others Orientation 2.904	3.167*	3.185*	3.153*	2.845
Learning Relevances 2.982	3.143*	2.917	3.313*	2.954

\* The P.S.A. Questionnaire also asked for a choice of one of three positive to negative directional responses; therefore the higher the median, the less the endorsement. This table also can only be considered as a general comparative indication as further Factor Analyses for the Sample breakdowns were made revealing complex differentiations.

considers the PSA scale answers as being positively directional, e.g.: answers proceeded by choices ranging from "A great deal," to "Some," to "Not very much." It will be recalled that those medians which are higher on a positively directed scale indicate less endorsement. Indian pupils in the total Indian sample and integrated and non-integrated Indian sample indicate less endorsement of the concept of the family as referenced by the Total Structural analysis than do the total sample (both Indian and non-Indian) and the non-Indian sample. The factor set reference is mainly upon feeling happy when one's family succeeds, (--the first factor item of the set). Because Indian children's families do not "succeed" in the sense of modern technological success, that is with a stable economic life base, their lower endorsement of this factor seems legitimate.

There also is a slight difference in Indian endorsements of the Learning -- Self-Others Orientation and in other Learning Relevances. Once again the predominant focus of the factor sets must be considered. For the Learning -- Self-Others Orientation, it is whether or not one's classmates think "you are smart." Esteem for being "smart" is not an endorsed Indian more; rather self-effacement is approved. A tendency for Indian children to reject this orientation seems quite plausible. For Learning Relevances, a factor designation which portrays further particular learning concepts, the focus is upon help in homework given by classmates. Since the Indian child is not as interested in homework accomplishment as is the non-Indian pupil, -- due perhaps to

lack of study space in the Indian home and less Indian family support for homework "getting done," their lower endorsement of this factor set does make sense. It will be noted that there is less endorsement of this factor set by non-Integrated Indian pupils than Integrated Indian pupils. Evidently Integrated Indian pupils are beginning to "buy" the notion of homework accomplishment, -- a value inculcation which speaks well for integrated education, if native pupils are to succeed academically.

The Total Sample Population analysis and that of its endorsement by the separate population samples indicates that help for both Indian and non-Indian children may be needed to overcome dichotomies which exist in expectations today for social accomplishment. The Indian child apparently needs much help in understanding the socialization ways of behavior of the larger society, and in realizing that he may have to endorse many of them in order to achieve in school and life. The non-Indian pupil needs help, too. His needs seem to lie in resolving other-directed orientations and sanctions given by society for his group participation and cooperation, coupled with expectations for his outstanding individual performance.

Indian Pupil Sample Perceived Social Achievement. When the Indian pupil PSA structural analysis is viewed as a gestalt, one is impressed with the consummatory - affectivity orientations<sup>34</sup> of the key concepts, the topic factor items of each factor set (Appendix V-11). In most instances, the focus is upon liking, family, friendships, and helping one another. Self concepts involve self-expressiveness in telling classmates how one

feels about schoolwork and liking learning at school. Family and neighborhood friends assume importance as significant others. Learning means liking to do what the rest of the class is doing; learning good English; helping classmates in decision-making, homework, and accomplishment in schoolwork.

Those areas in which the Indian sample does not have at least some content agreement with the total population sample (both Indian and non-Indian) are in the nature self expressiveness and learning-family relevances. Table V, page 35, reveals that in the former, "self expressiveness," Indian pupils want to talk to classmates (who may or may not be neighborhood friends)<sup>35</sup> about their schoolwork, and the total population sample endorses "telling friends who live nearby" about schoolwork. The Indian pupils probably are endorsing neighborhood friends, ethnic peers, as classmates, for it is with native friends that native children identify. The non-Indian sample also endorses Item 02, which deals with "taling to classmates about schoolwork." Table V-iii, page 37, discloses that in regard to learning relevances, the second area where there is lack of content agreement between the Indian sample and total population sample, the native pupils sample is concerned about accomplishment,<sup>36</sup> whereas the total sample structural analysis reveals no such separate, particular concern.

The Indian pupil sample PSA structural analysis differs also from that of non-Indian pupils. These differences will be dealt with



Table V  
Perceived Social Achievement Cross-Tabular Factor References for Total Sample,  
Indian and Non-Indian Samples

Total Sample	Indian Sample	Non-Indian Sample
<u>Self Expressiveness</u> Item 05 <u>Focus:</u> Telling friends who live nearby about schoolwork	<u>Self Expressiveness-Learning Orientation</u> Items 02,22 Factor items are <u>not in</u> agreement with Total Sample. <u>Focus:</u> Talking about schoolwork with classmates	<u>Self Expressiveness-Learning</u> Item 02 Factor item is <u>not in</u> agreement with Total Sample. <u>Some content</u> agreement with Indian Sample (Item 02). <u>Focus:</u> Talking about schoolwork with classmates <u>Self Perception - Helping</u> Item 04 Factor items show <u>no</u> agreement with Total or Indian samples. <u>Focus:</u> Helping others
<u>Self Perception</u> Item 03 <u>Focus:</u> Time Concern		
<u>Significant Others: Family</u> Items 13,17,15 <u>Focus:</u> Family success and liking	<u>Significant Others: Family</u> Items 15,13,17 Factor items are <u>in</u> agreement with Total Sample. <u>Focus:</u> Family liking and success	<u>Significant Others: Family-Learning</u> Items 14,17,01,15,12,09,11,10,22 Factor items show <u>some content</u> agreement with Total Sample and Indian Sample <u>Focus:</u> Concern over living in a boarding school or home; also family and classmate learning relevances
<u>Significant Others: Neighborhood Friends</u> Items 23,19,21,24,20 <u>Focus:</u> Liking by neighborhood friends	<u>Significant Others: Neighborhood Friends-Liking Orientation</u> Items 24,23 Factor items have <u>some</u> content agreement with Total Sample <u>Focus:</u> Liking and being liked	

\* Note: Agreement considerations involve like endorsements of Items

Table V-ii

Perceived Social Achievement Cross-Tabular Factor References for Total Sample,  
Indian and Non-Indian Samples

Total Sample	Indian Sample	Non-Indian Sample
	<p><u>Significant Others: Neighborhood Friends-Work-Activity</u> Items 21,20,19 Factor items have <u>some content agreement</u> with Total Sample <u>Focus:</u> Having a good time and working with neighborhood friends</p>	<p><u>Significant Others: Family-Peers Ambivalences</u> Items 13,06,16 Factor items show <u>some content agreement</u> with Total and Indian samples <u>Focus:</u> Family success, learning and family concern over failing at school</p> <p><u>Significant Others: Neighborhood Friends - Work-Activity Orientation</u> Items 21,19,20 Factor items show <u>some content agreement</u> with Total Sample <u>Agreement</u> with Indian Sample <u>Focus:</u> Having a good time and working with neighborhood friends</p> <p><u>Significant Others: Neighborhood Friends-Liking Orientation</u> Items 23,24 Factor items show <u>some content agreement</u> with Total Sample <u>Agreement</u> with Indian Sample <u>Focus:</u> Liking and being liked</p>

Table V-iii

Perceived Social Achievement Cross-Tabular Factor References for Total Sample,  
Indian and Non-Indian Samples

Total Sample	Indian Sample	Non-Indian Sample
<u>Learning-Others' Orientation</u> Items 11,10,22 <u>Focus:</u> Classroom learning and classmates	<u>Learning-Self Orientation</u> Item 06 Factor items show <u>no agree-</u> <u>ment with Total Sample</u> <u>Focus:</u> Liking to do what classmates do	
<u>Learning-Self-Others'</u> <u>Orientation</u> Items 07,04,08 <u>Focus:</u> Classmate esteem for "being smart"; parti- cipation in decision- making, and classmate liking	<u>Learning-Others' Orientation</u> Items 10,08 <u>Some content agreement with</u> <u>Total Sample (Item 10)</u> <u>Focus:</u> Learning English and liking others	
	<u>Learning-Self-Others'</u> <u>Orientation</u> Items 04,07 Factor items show <u>some content</u> <u>agreement with Total Sample</u> <u>Focus:</u> Helping others and esteem	<u>Learning-Self-Others'</u> <u>Orientation</u> Items 07,08 Factor items show <u>some content</u> <u>agreement with Total and</u> <u>Indian Samples</u> <u>Focus:</u> Classmate esteem and liking
<u>Learning Relevances</u> Items 09,12 <u>Focus:</u> Others helping you	<u>Learning Relevances</u> Items 09,12,14 Factor items show <u>some content</u> <u>agreement with Total Sample</u> <u>Focus:</u> Helping and being helped by classmates	
	<u>Learning-Family Relevances</u> Items 01,16 Factor items show <u>no agreement</u> <u>with Total Sample</u> <u>Focus:</u> Accomplishment in school and concern for family caring about such accomplishment	

in detail in the section of these PSA analyses which deals with non-Indian pupils. It may be said, however, that there is more focus on the part of Indian pupils as a whole upon learning perceptions involving self and relations with others; and there is more emphasis on the part of non-Indian pupils primarily upon significant others; family, peers, and neighborhood friends, -- and secondarily upon interest in learning.<sup>37</sup> These social perception concepts point to socialization areas which may be providing the children with learning blocks. The Indian child may be experiencing difficulty with gaining "a learning focus." The non-Indian child may know a "great deal about learning," -- after all it is the key to Protestant ethic work-success; however, he may have significant others-overstimulation or "pollution" to the extent of almost self-obliteration. "Who and what am I in the midst of many?" may be the non-Indian child's problem; whereas "Who and what am I, now that I, my family and my friends are considered outsiders in our native land; -- and how do I perceive learning in school?" seems to be the dilemma of the native child.

Indian Pupils in Integrated Schools. If any one trend might be said to indicate perceptions of Indian pupils in integrated schools as revealed by the PSA structural analysis, it would be that of evidence of an instrumental work-success inculcation; -- also Protestant ethic for the most part, Appendix V-iii. Integrated Indian pupils seem to be aware of: 1) a self perception orientation -- that of helping classmates; 2) significant others' orientations -- neighborhood friends and work activities; and 3) learning orientations -- learning and self, self to others, others to self, and learning-family relevances.

Throughout the Integrated Indian Pupil Sample Structural Analysis Perceived Social Achievement, Appendix V-iii, the evidence of instrumental work-success value inculcations stands out. (See the first or key item of each factor set.)

<u>Topic Factor Set</u>			<u>Instrumental Work-Success</u>
<u>Key Question</u>			<u>Orientations</u>
i)	helping classmates	--	"brother's keeper"
ii)	family success	--	"family work-success"
iii)	family liking and expectations for accomplishment	--	"family expectations for individual work accomplishment"
iv)	working and doing things with neighborhood friends	--	"peer expectations for work activity"
v)	learning: classmate "doingness"	--	"peer expectations for work activity"
vi)	learning: being on time	--	"worthy time accomplishments"
vii)	learning: being liked by peers	--	"friendship -- my 'brother and me'"
viii)	family concern for failure at school	--	"family expectations for individual work accomplishment"

As the factor sets, Appendix V-iii, are studied for indications of the adaptation of native pupils to work-success inculcations, some frustrations become apparent. In the helping classmates with decisions factor, Factor One, these Integrated Indian pupils reveal a bifurcated view: although they endorse the concept, the second item of the factor set reveals they are at the same time thinking about "having a good time or working together with friends who live nearby." The second factor set, Factor Two, indicates happiness over family accomplishment. One could contend that Indian families have always been happy about family success for theirs is a family-sharing plan for life.



The third factor set, although focussed upon family liking and expectations for accomplishment, reveals a mass of frustrations. Since most of the factor items bear negative loadings, in logical analysis the whole set would be considered negatively loaded. The principle for negatively loaded items in reference to a positively directed answer questionnaire would then apply: the higher the median, the more the endorsement. Those factor items more highly endorsed by the pupils are: being happy in a boarding school or boarding home, telling your classmates about how you feel about school work, and being helped by others as one studies and learns. The fear of boarding school or boarding home placement, something still a part of educational practices although now disappearing, receives a high anxiety endorsement, because it is a threat to these pupils. Certainly the recommendation can be made that these practices discontinue. Integrated native children, it seems, also want to "talk to their classmates about" and "be helped by them in" their learning tasks. "Classmates" here may refer to either Indian or non-Indian classmates. Indian pupils in integrated classrooms want to be liked. Those items less highly endorsed in this set are: being liked by one's family and getting things done in school. The Indian pupil's family might be in opposition to "getting things done in (an integrated) school;" rather the family with its extended familial relationships might endorse non-integrated education or even old traditional ways of learning. If so, it would be difficult for the pupil to be liked by his family yet "get things done in (an integrated) school." A recommendation for Indian pupils in integrated schools based upon this consideration calls for more family involvement

and family encouragement of getting things done in school.

For accomplishment in the greater society and adjustment to its value and socialization practices, integrated education seems to be the answer. Native pupils in integrated school situations are endorsing values which should give them a perception of social achievement in their relations with the greater society, providing they have help with perceptual bifurcations they undoubtedly experience in relating also to the native society of their origin.

The fourth factor set with its focus upon "working and doing things with neighborhood friends" seems slanted somewhat towards simply liking to do what your friends who live near you do, the second item of the factor set.

Factor Five centers about liking to do what classmates do and feeling the same way as they do about going to school. Factor Six is concerned with being early or on time to school or class, classmate esteem for being smart; and is crosscut by family orientations, the third item of the set. The seventh factor set is involved with being liked by classmates and friends who live nearby. The eighth factor set reveals family concern for school failure by the pupil and liking learning at school with friends. This set may be considered further revelation of frustration for these children where there may be lack of family interest or concern about school accomplishment. In cases where this is true, only school friends with parents holding like expectations would understand the child's "liking of learning at school."

In summary, it can be held that while the integrated Indian pupils'

structural analysis reveals inculcation of instrumental work-success ethics which should propel them to more accomplishment in the greater society, it also reveals frustrations, bifurcations, and perhaps fears grounded upon expectations counter to such ethics held by family and peers. The expectations of the family, particularly, may point to an Indian way of life based upon traditional ways instead of one based upon the learnings one gains at school.

Indian Pupils in Non-Integrated Schools. Predominant emphases for Indian pupils in non-integrated schools center about consummatory-liking orientations.<sup>34</sup> These native pupils indicate an enjoyment of the togetherness of tribal integrative behaviors carried over to the classroom situation, yet a concern for the problems of integrating with the larger society introduced by the learning approaches they encounter. According to Appendix V-iv, they are aware of: 1) "others to self" orientations; 2) significant others' orientations -- family and learning, neighborhood friends in work activities; and 3) learning orientations -- liking to do what the rest of the class is doing, a question about the amount of good English they want to learn, classmate esteem for "being smart," and liking learning at school with friends.

Happiness and consummatory goal gratifications in perceptions of self and native others yet awareness of the problems of adapting to the larger society's expectations brought on by contact with classroom situations seem to be apparent in the key item of each factor set of Appendix V-iv which follow:

<u>Topic Factor Set</u> <u>Key Question</u>		<u>Consummatory-Liking</u> <u>Orientations</u>
i) being liked by friends who live near you	--	"friendship - 'my brother and me'"
ii) concern over being liked by one's family	--	"family affectivity consolidation"
iii) having a good time and working with friends who live near you	--	"good time and working with peers gratifications"
iv) doing same things and feeling same way about school as classmates	--	"doing-feeling participations with classmates"
v) how much you and your friends want to learn good English	--	"larger societal adaptation problems"
vi) classmate esteem for being "smart"	--	"esteem success problems"
vii) liking learning at school with friends	--	"conjoint liking-learning problems"

Family and peer friendship linkage integrations are definitely apparent in the first four factor sets. The last three sets, however, indicate an awareness on the part of these children that looming over them is the problem of adapting to the greater society with language or successful learning of English the key, and esteem-success conjoint liking-learning problems to be faced. In regards to self and others, these children evidence a more stable PSA; their problem is with the learning portion of their lives: the need to adapt to the larger society and its different work-success orientations.

The first four factor sets show a relatively well integrated consummatory-liking pattern of perceived social achievement. The children feel they are liked and accepted -- this orientation is sustained by their endorsement of liking linkages with family, neighborhood friends and classmates throughout. Only in Factor Two, where certain negatively loaded factor items appear, is there any

indication of concern. When these negatively loaded items are considered to be positive and medians are weighed by the positively oriented scale questionnaire principle, Item No. 14 and Item No. 18 still indicate pupil concerns. Item 14, "How happy could you be in a boarding school or boarding home?" indicates some apprehension about the possibility of being placed in a school away from home. Item No. 18, "Does your family like to do what you like to do" may be a wish that families would do more things together. Indian adults today seem to seek entertainment apart from the young, and the children may be hoping for less of such behavior.

The last three learning factors indicate pupil concerns about instrumental practices which usually receive endorsements by the larger society. Factor Five deals with: 1) the amount of good English one wants to learn; 2) helping others in their studying, learning, and homework; and 3) feeling happy when the family succeeds. The first two items do, indeed, receive endorsement by the larger non-Indian society. The last item may reveal some concern that native families are not succeeding in spite of the door which should insure such success, i.e. "education." Factor Six reveals concern over esteem for being considered "smart," decision-making with classmates, and being liked by classmates. Since esteem for "being smart" would not be an endorsed Indian more, the thought it presents in relation to the other two items may be an indication of pupil refusal of a teacher expectation. Factor Seven reveals an endorsement of liking learning at school with friends, but less endorsement for talking to classmates about school work and family concern over one's failure at school.

If the stability of self-other relationships revealed by non-



integrated pupils could also provide enough endorsement of larger societal values to insure success or if some other means to accomplishment of success in life were open to these pupils, then this type of education would appear to be the better in respect to stable self-others' perceptions of social achievement. Unfortunately, the problem is in the tendencies for these pupils to endorse traditional ways of behavior and be frustrated by expectations of instrumental work-success orientations held by their teachers and educational systems. No one answer seems to be the solution. The recommendation with regard to these pupils is, however, that if they are to persist in non-integrated school situations, then some means for the whole band to bridge more effectively to the larger society via industrial training projects and cooperative ventures seems a necessity. Because there is no long range success goal to achieve, disenchantment with learning probably comes more readily for these pupils and a complete return to the affectivity-even-if-disadvantaged orientation occurs.

Perceived Social Achievement Cross-Tabular Factor References for Integrated and Non-Integrated Classrooms. Particular factor item agreements between the integrated and non-integrated Indian samples are not shown as they seem to reiterate the concepts of the key factors just discussed with the exception of the self-perception items. In the self-perception items, the integrated Indian sample focus is upon helping others, while the non-integrated focus is upon being liked by friends who live nearby.

Non-Indian PSA Findings. A gestalt view of the non-Indian pupil

perceived social achievement structural analysis reminds one of many social concerns which are being voiced today about youth (Appendix V-v). In self-perception, Factors One and Two, these pupils are involved with self-expressiveness or ventilation of their feelings about schoolwork with their classmates, and questioning the part they play in group decision making processes with their peers. With so much current publicity centering upon learning disenchantments and group decision processes, pupil self perceptions could well be expressed in these ways; therefore, these findings seem plausible.

The majority of their focus is upon their relations with significant others: see Factor Sets Three, Four, Five, and Six. They are interested in their families, their classroom peers, and neighborhood friends. They are fearful about family disorientations which could bring about boarding school or boarding home attendance (Factor Three), and evidently connect this with the extent of their learning accomplishment and liking to learn with friends at school. Family success, Factor Four, is important, and this, too, is related with learning accomplishment. One must study, so that family expectations are "lived up to."

Neighborhood friends seem an important focus as two factors, Factors Five and Six, deal with having a good time and working with neighborhood friends, and being liked by one's neighborhood friends.

Learning seems to assume less importance as a focus for this structural analysis with only one factor set, the last one, dealing with learning per se. In this set, the children reveal their

concern for classmate esteem for being considered "smart," and yet being liked, too. The old concept of nobody likes an "egghead" or high achiever seems still to hold sway with these pupils.

Non-Indian pupils are perhaps more concerned with others than with self. They also seem to see their lives as oriented to others even in respect to self perception and learning. One does wonder if they are so other-directed as to be needing methods and skills to reinforce self concepts and learning endorsements. Communication courses to understand self in relation to others might help to reinforce self concept in a learning context. Such courses could include Goffman's concepts of sign activity in self expression: 1) that which a person gives, and 2) the expression that he gives off.<sup>38</sup> In addition, consideration for roles one plays in group decision-making processes might prove helpful.<sup>39,40</sup>

Pro-learning orientations could be revitalized with new pilot course involvements of pupils in planning, actuating, and evaluating course outcomes. The distance between pupil and teacher seems in need of being bridged, and this can be effected through participatory planning not only of initial course objectives, but throughout the evolution of courses. Pupils also need to be included in course evaluations so that such evaluations are not simply "receiving a grade for individual endeavor," but an evaluation of the entire project: teacher, group participatory roles, positive and negative designations, and outcomes.<sup>41</sup>

Non-Indian Pupil PSA Comparisons with Total and Indian Structural Analyses. A return look at Table V to view comparisons of non-Indian pupil PSA with the Total PSA Structural Analysis and Indian PSA Structural Analysis reveals at least some content agreement of non-Indian factor items with the Total Structural Analysis, except for the area of self-perception.<sup>42</sup> The total sample endorses "telling friends who live nearby about schoolwork," while the non-Indian sample reveals an endorsement of "talking about schoolwork with classmates."<sup>43</sup> This difference does not appear to be too important as many of the non-Indian children's classmates are probably also their neighborhood friends.

The interesting difference shown by Table V seems to be that of a broader view. As has been mentioned, the Indian sample is concerned with self-expressiveness, significant others, and five factor sets of concern about learning, the last five factors of the Indian Sample Structural Analysis. These include: learning-self-orientations, learning-others' orientations, learning-self-others' orientation, learning relevances, and learning-family relevances. From so much emphasis upon learning, it may be concluded that Indian pupils are indeed concerned about learning. The non-Indian analysis, on the other hand, reveals not only self-expressiveness but a self-helping orientation, some four factor sets involved with significant others, and only one factor designative of learning: a learning-self-others' orientation. By this, non-Indian pupils seem more concerned with

others and self-others than with learning. It should be mentioned that these breakdowns were made with a consideration for the logic of the dominant factor, the key item of each factor set, although further consideration was given to other items in the factor sets.

It may be contended from the PSA analyses that Indian pupils need help from teachers in working through their perceptions of social achievement in respect to learning. Such help would include the teacher providing clear indications of the kinds of instrumental work-success orientations which are expected by the larger society, orientations which can aid one in succeeding within the framework of that society. Teachers of native children also need to understand the positive socio-emotional supports, the liking supports, needed by them for encouragement in learning. When teachers can help these children to effectively relate their consummatory-liking dispositions to the instrumental work-success orientations of the greater society, there should be more evidence of native pupils coping successfully with the developmental stages of their lives.

The suggestion is made to teachers that they allow expressions of consummatory-liking in classroom experiences. This means allowing native children to express social achievement where they understand it best, in dancing, painting, story and myth-telling. Such expression could be enhanced by allowing parents and tribal elders to participate. Such activities should not be just occasional weekly occurrences, but



an integral part of other daily learning activities. Only when the teacher also can participate in such occurrences, i.e. in the planning, execution, and enjoyment of them, will he be accepted. When the teacher has gained such acceptance, the introduction of instrumental work-success orientations presented to meet the reality of "the place where Indian people stand in relation to work in the world today" can be made.

Non-Indian pupils have need of help from their teachers, as well. Their needs also seem to lie in an adequate definition of self; -- perhaps like the Indian pupil in the area of self respect and how one knows one is worthwhile. It is suggested that better social achievement concepts can come through being able to communicate adequately, participate effectively with peer groups in making decisions, and reflecting upon such interactions. Non-Indian pupils need help from teachers in understanding other people: adults and peers. Role and group process learnings seem needed parts of their schoolroom practices.

It is suggested that teacher training institutions provide special courses in educational communications and group practices to allow teachers to meet pupil interaction needs with pragmatic tools. The tendency seems to be for too much distance to exist between teachers and pupils, a distance which apparently is helping to promote perceived social achievement inadequacies on the part of pupils.

Learning motivation revitalization also is needed in classrooms. This can be effected by more pupil participation in planning, doing, and evaluating classroom work. New pilot learning projects may provide

an impetus for such participation. Above all, the teacher needs to assume a new role, a participating role which helps the classroom group to move towards group existential learning moments. A group existential learning moment may be defined as a hyperintensification of learning exhilaration, a discovery. Such a moment calls for complete individual component existences and involvements in the learning act. Teacher interest expressed with sincere enthusiasm can result in interest contagion for pupils. This implies that perhaps teachers need to cultivate more enthusiasm, the emotional quality of personal involvement within themselves, as a spur to classroom involvement in learning motivation.

The PSA Hypotheses. The Indian pupil PSA hypothesis may be considered a valid one, however analysis findings point to Indian pupil perceived social achievement conflicts and needs which seem to surpass the hypothesis. The hypothesis indicates a suggestion that Indian pupils may need Indian classroom climates with Indian teaching guidance. These do seem to be ways to effect improved PSA for them. Until such time as more native teachers are available, however, teacher understanding of native consummatory-liking life and extended to practical consummatory-liking classroom occurrences can allow better bases for introduction of instrumental work-success inculcations.

The non-Indian hypothesis also holds some validity in that non-Indian pupils are torn by home and peer pressures. This hypothesis also does not exemplify the PSA findings completely, for non-Indian pupils seem to have too little self-endorsement, too

much "others" endorsement, and not enough learning motivation involvement. Improved PSA for these pupils should include many sessions to bring about communication and group process understandings. Better learning motivation can be accomplished through their greater involvement in planning, effecting, and evaluating their learning acts.

### Teaching Dimensions of Learning Behavior

This portion of the analysis deals with pupils' perceptions of teaching dimensions. The focus is upon how pupils tested tend to see their teachers' behaviors. The Gordon-Adler-McNeil scale employed in the research provides expressive, authority, and task dimensions of teacher leadership in classroom social systems. For the most part, the analysis is similar to that used in the foregoing Pupil Morale and Pupil Perceived Social Achievement analyses: 1) gaining structural perceptual differentiations of the Total, Indian and Non-Indian samples, as well as Integrated and Non-Integrated pupil samples and 2) searching the structural analyses by cross-tabular reference tables for items in agreement or non-agreement. The Gordon-Adler-McNeil indexes were used to characterize each item of the factor sets as being expressive, authority or task oriented. Factor sets were then designated as fitting these descriptions, and arbitrary sequencing of the sets was arranged to meet their connotations. Perhaps the first discovery made was of an additional dimension in this research for all

the sample breakdowns except that of Indian pupils in integrated schoolrooms, that of: "the small group dimension." Evidently, pupils are becoming aware of working in small groups. Perhaps the lack of endorsement of this concept as a separate and distinct factor by Indian pupils in integrated classrooms could be explained by the very small percentage of Indian pupils per class population in integrated classrooms. It may be very disenchanting to these native pupils to work in small groups when there are not others they like or feel a relationships with in the groups. The small group dimension, as well as those found in the Gordon-Adler-McNeil study, will be discussed in reference to the various sample findings.

Total Sample Findings. The total sample structural analysis, Appendix VI-viii, reveals teaching dimension perceptions of six hundred and forty-four Indian and non-Indian pupils. The pupils endorse the presence of expressive, authority, task, and small group dimensions of teaching behavior shown by their teachers. Expressive behaviors of their teachers, according to the pupils, focus upon: 1) making the class "fun" for pupils, 2) helping them with school work or anything needed, and 3) expressing "liking" or positive socio-emotional supports in their teaching practices. The authority dimensions of teaching behavior, as the pupils see them, include: 1) being allowed to leave their seats without permission providing they follow rules, and 2) teachers being flexible about changing assignments when pupils do not like them. In task dimensions, they endorse: 1) teachers using a certain kind of work again during the school year although new work

has been taken up; 2) teachers deciding how something should be done in class, although they may want more participation in such decisions; and 3) class discussion when teacher and pupils disagree to obtain all views. They like working in small groups and reveal that they have been in one, two or three small groups during the class year. The endorsements provide indications that these pupils favor warm, helpful teachers, who practice democratic procedures in classroom work and social climate control.

Sample Designations re Total Sample Structural Analysis. Rather than using median sample breakdown comparisons on the Total Sample factor sets to gain a gestalt of how the various samples relate to the broad categories just cited, percentage breakdowns to total scale question indexes were gained, Appendix VI-i -- VI-vii. This was necessary because the questions had varying numbers of answers.<sup>44</sup> The response designations do give interesting comparisons; for example, the total pupil sample, composed of both Indian and non-Indian pupils, tend to endorse the existence of teaching behavior such as: making the class and class work "fun" for pupils; being "fair" in deciding something about a pupil; using teacher ideas, ideas in books and pupil ideas; helping pupils with school work and anything needed; making sure children learn facts but also caring how they feel; liking all or most pupils; being allowed to leave seats providing they follow rules; making sure pupils complete all written assignments; explaining new work when it is presented; seeing to it that pupils keep on using a certain kind of work even when new work is taken up; reviewing some lessons but not every day; writing or telling an answer at least several times a week; talking together about



teacher-pupil disagreements; marking and explaining all mistakes and allowing small group and conjoint planning of projects. This is indeed a picture of "the ideal teacher." Indian pupils seem less supportive of many of these concepts, and Indian pupils in integrated classrooms appear to endorse them even less than the others. The total pupil sample: both Indian and non-Indian indicate rejection of teaching dimensions which exist, such as: getting new work before they have gotten answers to old work; teachers hardly ever changing assignments because pupils do not like them; teachers doing all the deciding and telling how pupils will do something in class, particularly where new work is concerned; and teacher decisions regarding what and how project work is to be done. Some pupils seem to believe teachers are a bit more lenient in some of these matters.

Appendix VI-viii findings were viewed as being broadly indicative of total pupil orientations. Factor analyses for the separate pupil populations also were made to discover particular sample orientations.

Indian Pupil Sample Findings. Indian pupils see teaching dimensions as being expressive, task, and small group oriented (Appendix VI-ix). They like teaching behaviors which express use of the teacher's ideas, ideas in books, and pupils' ideas. They are bifurcated about teacher likes and dislikes of pupils in class. They are concerned about teachers giving them credit for how well they do in class; and they want more help with school work and anything needed from teachers. They want teachers to make sure they learn the facts, but also care how they feel.

In task perceptions of teaching behaviors, they indicate some task-authority problems regarding new work being assigned before they are able

to get right answers to old work. In this dimension, they would like teachers to change assignments at least once in awhile when pupils do not like them. They are desirous, too, of using a certain kind of work again during the year after they have learned it. They want all exercises or test papers corrected, although they indicate that they usually are, (see Appendix VI-ix). They want teachers to explain why they have to do something they do not want to do. The task orientations seem to hold a "quiet plea" for more understanding of Indian pupils and their needs.

Small group perceptions of these pupils point to small group endorsements and small group trends: they want small group work and endorse that they have been in at least three groups during the school year; and they indicate that, for the most part, the teacher tells the group exactly what to do and how to do it in project assignments.

In a comparison of Indian pupils as a whole with Total sample teaching dimension designations, at least some content agreement seems apparent, Table VII. The table calls attention to the disagreement of the Indian sample with the Total sample on authority dimensions. Indian pupils seem to see their teachers as evidencing expressive-task-small group behaviors. Perhaps they perceive what they want to see in their teachers. They may seek more expressive dimensions of teaching behavior than authority dimensions, because expressive teaching behaviors hold warm socio-emotional rewards. Item 26 of the Expressive-Task Dimension I of the Indian Sample is not found in the Total sample perceptions. This is the factor item

Table VII  
Teaching Dimensions of Learning Behavior Cross-Tabular Factor References for Total, Indian  
and Non-Indian Samples

Total Sample	Indian Sample	Non-Indian Sample
<u>Expressive Dimension</u> Items 20,17,22,27 <u>Focus:</u> Teacher effort to make class "fun" and "fair" for pupils.	<u>Expressive Dimension</u> Items 27,22 Factor items show <u>some content agreement</u> with Total and Non-Indian Samples. <u>Focus:</u> Teacher fairness re pupil ideas and actions.	<u>Expressive Dimension</u> Items 17,20,21,13,22 Factor items show <u>some content agreement</u> with Total and Indian Samples. <u>Focus:</u> Teacher effort to make class "fun" and "fair" for pupils.
<u>Expressive Helpfulness Dimension</u> Items 25,24,23 <u>Focus:</u> Teacher help with school work or anything needed.	<u>Expressive-Liking Dimension</u> Items 19,21 Factor items show <u>some content agreement</u> with Total Sample. <u>Focus:</u> Teacher liking-disliking ambivalences.	<u>Expressive-Helpfulness Dimension</u> Items 23,24,25,26 Factor items show <u>some content agreement</u> with Total and Indian Samples. <u>Focus:</u> Teacher help and fairness re school work and anything needed.
<u>Expressive-Liking-Task Assignment Dimension</u> Items 21,19,01 <u>Focus:</u> Teacher Liking-Disliking of Pupils and Task Fairness.	<u>Expressive-Task Dimension I</u> Items 26,02 <u>No agreement</u> of Item 26 with Total Sample. Some agreement with Non-Indian Sample. <u>Focus:</u> Teacher credit for pupil effort. <u>Expressive-Task Dimension II</u> Items 25,04,23 Factor items show <u>some content agreement</u> with Total and Non-Indian Samples. <u>Focus:</u> Teacher help with school work or anything needed.	

Table VII-ii  
Teaching Dimension of Learning Behavior Cross-Tabular Factor References for Total, Indian  
and Non-Indian Samples

Total Sample	Indian Sample	Non-Indian Sample
	<u>Expressive-Interaction Dimension</u> Items 24,15 Factor items show <u>some content agreement</u> with Total Sample. <u>Focus:</u> Teacher concern for pupils.	
<u>Authority Dimension</u> Items 08,02 <u>Focus:</u> Teacher permissiveness		<u>Authority Dimension</u> Items 10,15,09,11,14 Factor items show <u>some content agreement</u> with Total and Indian Samples. <u>Focus:</u> Fairness of teacher re planning of work with pupils and in its execution.
<u>Authority-Task Dimension</u> Items 14,11,04 <u>Focus:</u> Teacher dictatorialness re assignments and tasks.	<u>Task-Authority Dimension</u> Items 01,14 Factor items also show <u>some content agreement</u> with Total and Non-Indian Samples. <u>Focus:</u> Teacher task assignment fairness.	<u>Authority-Task Dimension</u> Items 02,04 Factor items show <u>some content agreement</u> with Total Sample. <u>Some content agreement</u> with Expressive-Task Dimensions of Indian Sample. <u>Focus:</u> Concern over teacher task demands.
<u>Task Dimension</u> Items 06,03,05 <u>Focus:</u> Teacher demands for work learning and review.	<u>Task Dimension</u> Items 06,03 Factor items show <u>some content agreement</u> with Total and Non-Indian Samples. <u>Focus:</u> Work learning and review teacher demands.	<u>Task Dimension</u> Items 05,03,01,06 Factor items show <u>some content agreement</u> with Total and Indian Samples. <u>Focus:</u> Teacher demands for work learning and review.

Table VII-iii

Teaching Dimension of Learning Behavior Cross-Tabular Factor References for Total,  
Indian and Non-Indian Samples

Total Sample	Indian Sample	Non-Indian Sample
	<u>Task-Evaluation Dimension</u> Item 07 Factor item shows <u>some content agreement</u> with Total and Non-Indian Samples. <u>Focus</u> : Teacher evaluation.	<u>Task-Expressive-Dislike Dimension</u> Items 07, 19 Factor items show <u>some content agreement</u> with Total and Indian Samples. <u>Focus</u> : Concern over teacher evaluation and disliking.
<u>Teacher-Pupil Interaction Dimension</u> Items 12, 07 <u>Focus</u> : Teacher considerations of pupils in classwork planning.	<u>Teacher-Pupil-Task Dimension</u> Items 13, 20, 12 Factor items show <u>some content agreement</u> with Total Sample. <u>Focus</u> : Teacher "fairness-fun" seeking vs teacher unwillingness to talk out disagreements.	
<u>Small Group Dimension</u> Items 16, 09 <u>Focus</u> : Teacher provision for small group work.	<u>Small Group Dimension</u> Items 09, 16 Factor items are <u>in agreement</u> with Total Sample. <u>Focus</u> : Teacher instruction in small groups.	<u>Expressive-Small Group Dimension</u> Items 18, 16 Factor items show <u>content agreement</u> with Total and Indian Samples. <u>Focus</u> : Teacher kindness and small group work.



which indicates teacher credit for pupil effort. Item 26 asks, "Does this teacher give you credit for how well you do in class?" It has three optional responses: a) only for how well I do on papers and tests, b) for everything I do in class, and c) for trying to work, even if I do not do well. The Indian sample as a whole responded that they received credit:

- a) only for how well they did on papers and tests - 35.2%
- b) for everything they did in class - 24.6%
- c) for trying to work, even if they did not do well - 40.2%

Their slightly higher endorsement of the last item, makes one wonder if they are not perceptive of the idea that while teachers are attempting to reach them for trying to work, these may be teacher indulgences in grading over and beyond that which they may earn. Such a thought seems to be supported by the 24.6% who endorsed the "b)" response.

Indian pupils apparently are seeking warm, supportive, expressive teaching behaviors. They want teachers with task expectations that meet their abilities and teachers who show concerns for their wants and needs. Such teachers hopefully will provide explanations when they do not understand why they have to do something they do not want to do.<sup>45</sup> They enjoy small groups and see teachers structuring group projects by designating what they should do and how they should do it.

Indian Pupils in Integrated Classrooms. The structural analysis for Indian pupils in integrated classrooms can be considered with somewhat less certainty than desired due to the smallness of sample which could be used to meet the .50 factor loading requirements. The analysis does, however, account for 86.2% of the variance. An overall perusal of

Appendix VI-x brings the realization that these pupils seem to be concerned with expressive, authority, and task dimensions of teaching behavior. In Expressive Dimensions, they are interested in a teacher helping with school work or anything needed, and being kind and showing a liking for pupils as he helps them with the learning task. In addition, they endorse teachers making the class and class work "fun" for pupils. They want teachers who will give them more help with their work, and who will talk out teacher-pupil disagreements. They see teachers as holding them to accomplishment on tests and papers in Item 26, which measures credit given for how well they perform in class.

In Authority Dimensions, they want more freedom in group project work, and they see teachers as expecting them to meet teacher plans for class work. Item 02, although loading at  $-.494$ , was included in this factor set, because it indicates the way these pupils view teacher expectations for pupil completion of written assignments. They indicate that teachers make sure they complete nearly all assignments "at least sometimes."

They are concerned that when the teacher asks pupils to do something they do not want to do, he explains why they have to do it "only sometimes." This concern seems coupled with "teacher dislike" in the sixth factor set, the Authority-Task Dimension. This factor seems biased in the direction of lack of concern by teachers for the way Indian pupils see things. Item 14, "How often would you say this teacher has changed assignments this year because the pupils didn't

like them?" is answered predominantly, "hardly ever," (51.1%, page 150). These pupils want to leave their seats providing they obey the rules. They also want to use the teacher's ideas, ideas in books, and their own ideas in class.

With regard to task dimensions of teaching behavior, the pupils respect teachers who review work they have had before starting new work, and they are supportive of the fact that teachers do, indeed, do this every lesson or most of the time. They also are concerned that they are sometimes given new work in class before they are able to get the right answers to old work, although they admit, for the most part, that all mistakes are marked on their exercises or test papers.

Teachers should and do seem to make an effort to try to explain work another way when the class is learning something new and doesn't understand, according to these pupils. They endorse a concern also that teachers make sure that the pupils learn the facts, but care how they feel.

Indian pupils in integrated classrooms seem to be interested in expressive dimensions of teaching behavior; want more freedom from teachers in regards to authority dimensions; and are concerned about teacher task assignments including adequate review of work, explanation of another way to do work when the class doesn't understand, and while making sure pupils learn the facts, -- caring about how they feel.

Indian Pupils in Non-Integrated Classrooms. Indian pupils in these classrooms are concerned with expressive, authority, task, and small group dimensions of teaching behavior (Appendix VI-xi). In expressive dimensions, they are supportive of those teachers who will give them credit for performing well in class, and being

fair; in making the work interesting or "fun;" and in using the teacher's ideas, ideas in books, and pupil ideas.

In respect to their perceptions of teachers' authority dimensions, they seem to want teachers to help pupils talk about teacher-pupil disagreements so that they may see how the teacher thinks and how the class thinks. They indicate, for the most part, that when a teacher has made up his mind about something, he has changed it "a few times when the pupils had good reasons." (See Item 11, Appendix VI-ix, page 151.)

Their responses to task dimensions of teaching behavior speak for their desires for more pupil orientation to classroom guidance and more pupil expressiveness related to the task. The sixth factor set, page 161, "Teacher-Pupil-Task Dimension," reveals that they want the teacher to explain why pupils have to do something when they do not want to do it. In answer to the seventh factor set question, "How often would you say this teacher has changed assignments this year because the pupils didn't like them?" some 46.8% of the pupils responded, "Hardly ever," page 150. When the teacher is teaching the class something new and the class doesn't understand, they respond, for the most part, that "the teacher tries to explain it another way," (57.9%, page 151); 34.2%, however, say that "he gives the same explanation over again." They endorse that when they have learned a certain kind of work in school, they "keep using it sometimes after they have taken up new work," (55.8%, page 151).

They indicate interest in small group instruction, reporting that they have been in "one, two or three," or "four or more" small groups in class during the year, page 153. In group work, they endorse, for the most

part, that the teacher "tells the group exactly what to do and how to do it," (44.7%, page 154).

In summary, it may be held that pupils in non-integrated classrooms reveal interest in teachers who are expressively fair in giving credit, making the work interesting for them, and who use many sources for ideas in classroom work. They are concerned with teacher authority dimensions of fairness in respect to handling teacher-pupil disagreements, and in teachers being willing to change their minds when a pupil might have a point. In task dimensions, they want more pupil orientation to classroom guidance and pupil expressiveness about tasks. They like and indicate that they have had small group experiences; however, for the most part, they indicate that these have been entirely teacher-directed.

Comparison of Indian Pupil Perceptions of Dimensions of Teaching Behavior in Integrated and Non-Integrated Classrooms. Table VIII reveals major endorsements and Indian pupil needs regarding teaching behaviors in integrated and non-integrated classrooms. The table is a summary of the foregoing reports of these two groups and is based upon the "key" or first factor item of each factor set. The items reveal some agreements of expressive endorsements; however, two interesting differences in focus appear. Indian pupils in integrated classrooms seem to focus their desires upon more help with school work or anything needed, Items 25,23. Indian pupils in non-integrated classrooms are concerned in focus with teacher ideas, ideas in books and their "own" ideas, Item 27. Both those in integrated and non-integrated classrooms endorse Item 26, "teacher credit for effort." The foregoing implies that the focus for integrated Indian pupils is upon a classroom task area of concern, e.g. "more help with it;" while that of non-integrated



Indian pupils is upon a broad use of idea sources, -- "not just the teacher's ideas, not just ideas in books, but their own ideas as well."

In authority dimensions, both groups seem to be asking for more freedom of expression and more explanation of differing teacher-pupil perspectives.

Integrated pupils seem to have less task dimensional foci concerns than non-integrated pupils. Integrated pupils just want to make sure they have review of work and a clear explanation of new work. Non-integrated pupils focus upon a need for teacher realization that they: 1) have need to know "why" they must do something, 2) want a teacher willingness to "bend a little" to their ways of seeing things, 3) are asking for new interpretations of new class work assignments when they do not understand, 4) want to use work again when it is learned, and 5) like small group experiences.

Non-Indian Pupils' Perceptions of Teaching Dimensions. Non-Indian pupils endorse expressive, authority, task, and expressive-small group dimensions of teaching behavior, (Appendix VI-xii). In expressive dimensions, they indicate interest in teachers making the work interesting or "fun" for pupils, their liking pupils, explaining why a pupil has to do something he does not want to do, and being fair in deciding something about a pupil. They are concerned with teachers' expressive-helpfulness in respect to helping them with work, caring how they feel as well as their learning facts, and in giving them credit for how well they do in class.

They are aware of arbitrary teacher behaviors regarding the class

Table VIII  
Teaching Dimensions of Learning Behavior  
Major Integrated and Non-Integrated Indian Endorsements and Needs  
(Based upon Key Factors of Factor Sets)

Integrated Indians		Non-Integrated Indians	
Expressive Dimension Endorsements	<ul style="list-style-type: none"> <li>- help with school work or anything needed, Item 25</li> <li>- class "fun" for pupils, Item 20</li> <li>- help with work as much as needed, Item 23</li> <li>- teacher credit for effort, Item 26*</li> </ul>	Expressive Dimension Endorsements	<ul style="list-style-type: none"> <li>- teacher credit for effort, Item 26</li> <li>- work interesting or "fun" for pupils, Item 17*</li> <li>- use of teacher ideas, ideas in books and "own" ideas (particularly the latter), Item 27</li> </ul>
Authority Dimension Needs	<ul style="list-style-type: none"> <li>- more freedom in group project work, Item 09</li> <li>- more explanation why pupils have to do work, Item 13</li> <li>- more permissiveness re leaving seats, Item 08</li> </ul>	Authority Dimension Needs	<ul style="list-style-type: none"> <li>- more willingness to help pupils talk about disagreements over some fact in class, Item 12</li> <li>- more willingness to change his (the teacher's) mind when pupils did not like something, Item 11</li> </ul>

\*Three highest factor loadings are indicated.

Table VIII-ii  
Teaching Dimensions of Learning Behavior  
Major Integrated and Non-Integrated Indian Endorsements and Needs  
(Based upon Key Factors of Factor Sets)

Integrated Indians		Non-Integrated Indians	
Task Dimension Concerns	<ul style="list-style-type: none"> <li>- review of work before starting new work, Item 03*</li> <li>- explanation in another way when teaching something new and class doesn't understand, Item 04*</li> </ul>	Task Dimension Concerns	<ul style="list-style-type: none"> <li>- Explanation when pupils have to do something they do not want to do, Item 13*</li> <li>- willingness to change assignments when pupils don't like them, Item 14</li> <li>- explanation in another way when teaching something new and class doesn't understand, Item 04*</li> <li>- using work again after it is learned during year, even though new work has been started, Item 06</li> <li>- small group experiences, Item 16</li> </ul>

\* Three highest factor loadings are indicated.

starting a new kind of work, directing them more than allowing them some "say" in class planning and execution of work, lack of consideration for pupils once a teacher has made up his mind, and teacher willingness to change assignments because pupils do not like them. (For percentage endorsements of these latter two items, see also Items 11 and 15 of Appendixes VI-iv and VI-v, pages 151,152.) In the "Authority-task Dimension," Factor Four, they see teachers as making sure they complete all written assignments. They assure that teachers do tend to try to explain work another way when the class doesn't understand.

In task dimensions they, for the most part, contend that teachers have them write or tell what they know several times every day (30.0%, page 152), almost every day (25.6%) or at least several times a week (21.9%). They are concerned about review of old work, the start of new work before they have right answers to old work, and the continued use of work once it is learned, page 164.

They couple exercise and task evaluations of test papers with disliking of pupils by teachers in the Sixth Factor, page 164, yet they indicate in the Seventh Factor, page 164, that "just about always teachers are kind" in asking questions and in allowing small group work.

Non-Indian pupils want more expressive dimensions of teaching behavior; less arbitrariness of teacher direction and decision-making in class planning and work; stringencies of teacher task demands regarding review of old work, learning new work, and using work once learned. They see disliking coupled with teacher evaluation of tests, and yet kindness in teachers in asking them questions and allowing small group work.

Non-Indian Pupils TDLB Comparisons with Total and Indian Structural Analyses. Table VII reveals non-Indian pupils' concepts of teaching dimensions in relation to those of the Total and Indian samples. A gestalt view of the table provides one with the impression that non-Indian pupils seem almost equally divided in their concerns regarding the four main logical dimensions: expressive, authority, task, and small group. It will be recalled that the Indian pupils were more concerned with expressive, task and small group dimensions. In an overall sense, non-Indian pupils' perceptions are more like those revealed by the Total structural analysis; something that might be expected due to the large proportion of non-Indian pupils in the sample. Throughout the comparison, non-Indian pupils show at least some content agreement with both the Total and Indian sample endorsements. The comparison is of importance to teachers and administrators, perhaps more in its broad reference, that Indian pupils seek more expressive-task-small group types of teaching dimensions, while non-Indian pupils seek all four dimensions: expressive, authority, task, and small group teaching behaviors.

Table IX reveals major endorsements and needs of Indian and non-Indian pupils based upon "key" or first item factor indications. The table reveals and further endorses likenesses and differences in viewpoint of Indian and non-Indian pupils. The three major concepts endorsed by Indian pupils are: 1) concern for expressions of "disliking" by teachers, Item 19; 2) teachers making sure pupils learn facts but also caring how they feel, Item 24; and 3) teachers providing more instruction in small groups, Item 09. The three major endorsements and needs approved by non-Indian pupils include: 1) teachers making work interesting or "fun" for pupils, Item 17; 2) pupils



showing teachers what they know by writing or telling answers, Item 05; and 3) kindness of teachers expressed to pupils in asking questions, Item 18.

It may be gathered from these endorsements and needs that both Indian and non-Indian pupils like expressive teaching dimensions, are concerned about teacher fairness in explaining why work should be done, respect teacher demands for task assignments, and are interested in more small group work.

The suggestion is made to teachers: 1) to reinforce their expressive teaching dimensions of behavior to meet pupil endorsements; 2) to explain authority requirements in planning for and execution of work, and where possible, include pupils in planning procedures; and 3) indicate clearly what task assignments and expectations are required with a willingness to explain new work "more than one way;" and 4) to provide where possible for small group work with some consideration for pupils at least in how the work will be accomplished.

Special considerations of Indian pupils seem necessary. In teaching dimensions, teachers should make every effort to: 1) indicate "liking" of these pupils; 2) consider their learning the facts yet show that they care how pupils feel about such learning; 3) provide for review, use of work again after it is learned, and help with school work and "anything" needed; 4) give clear indications how work is wrong in marking papers; and 5) provide for more instruction in small groups with consideration for placing other native children in a small group to which an Indian child is assigned.

Table IX  
Teaching Dimensions of Learning Behavior  
Major Indian - Non-Indian Endorsements and Needs  
(Based upon Key Factors of Factor Sets)

Indians		Non-Indians	
Expressive Dimension Endorsements	- use of teacher ideas, ideas in books and "own" ideas, Item 27	Expressive Dimension Endorse- ments	- work interesting or "fun" for pupils, Item 17*
	- expression of teacher liking or <u>disliking</u> , Item 19*		- help with work, as much as needed, Item 23
	- teacher credit for effort, Item 26	Authority Dimension Needs	- more willingness to plan with pupils how work will be done when new work is started, Item 10
	- help with school work or anything needed, Item 25		- making sure pupil completes all written assignments, Item 02
	- making sure pupils learn facts but caring how they feel, Item 24*		
Task Dimension Concerns	- making sure pupils get right answers to old work before giving new work, Item 01	Task Dimension Concerns	- showing teacher what one knows by writing or telling answer, Item 05*
	- using work again after it is learning during year, even though new work has been started, Item 06		- how test papers are corrected - with all mistakes marked and indication of "how" the work is wrong, Item 07
	- how test papers are corrected - with all mistakes marked and indicated of "how" the work is wrong, Item 07		
	- more explanation why pupils have to do work, Item 13		
Small Group Endorsement	- More instruction in small groups, Item 09*	Expressive Small Group Endorse- ment	- kindness to pupils in asking questions, Item 18* (linked to sanctions of small groups)

\*Three highest factor loadings are indicated.

The Indian pupil TDLB hypothesis is disproved in that Indian pupils reveal perception of expressive teaching dimensions of behavior over and beyond authority dimensions. They want more understanding of their needs, clarification of working tasks, and are interested in small group work.

The non-Indian pupil TDLB hypothesis is upheld in that these pupils do perceive teachers as being traditional or having authority dimensions of behavior, as well as being functional or task-oriented. Non-Indian pupils approve expressive or warm socio-emotional supports by teachers, and also are interested in small group assignments.

### Three Additional Scales

Three additional scales were constructed from the Perceived Social Achievement Scale because they are indicative of Protestant ethic, strong family orientation, and classroom conformity designations which seem to bear heavily upon Indian and non-Indian pupil perceptual differences. They are presented below in reference to Total group structural differentiations:

### Protestant Ethic Structural Analysis

<u>Item No.</u>		<u>Rotated Factor Scores</u>
16	Do you think your family cares if you fail at school?	.704
01	How much do you want to get done in your school work?	.682
03	How often are you early or on time to school or class?	.596

N = 648  
Variance accounted  
for = 44.0%

## Family Structural Analysis

<u>Item No.</u>		<u>Rotated Factor Scores</u>
17	Do you think your family likes you?	.738
13	Do you feel happy when your family succeeds?	.726
15	Do you like doing things and going places with your family?	.666
18	Does your family like to do what you like to do?	.461
16	Do you think your family cares if you fail at school?	.421
14	How happy could you be in a boarding school or boarding home?	-.358

N = 646  
 Variance accounted  
 for = 33.9%

Classroom Conformity  
Structural Analysis

<u>Item No.</u>		<u>Rotated Factor Scores</u>
07	Do your classmates think you are "smart"?	.672
06	Do you like to do what the rest of your class is doing?	.626
11	Do your classmates sometimes feel the same way you feel about going to school?	.611

N = 643  
 Variance accounted  
 for = 40.5%

The usefulness of the three subscales as focal indicators of perceptual differences is considered further in regards to the sex, age, ethnicity, and integration analyses which follow.

Further Morale, Perceived Social Achievement,  
Teaching Dimensions of Learning Behavior,  
Protestant Ethic, Family Orientation, and  
Conformity to Classroom Indices

Methods of Further Analyses. The Morale, Perceived Social Achievement, Teaching Dimensions of Learning Behavior, and three subscales were subjected to multiple regression analyses in efforts to determine measurements which might be more strongly indicative of differences which exist between the Indian and non-Indian samples.<sup>46</sup> Appendix VII, the multiple regression with respect to ethnicity, and Appendix VIII, the multiple regression in regards to integration of Indian pupils, are examples. The analyses were used only to determine further kinds of analyses because the data was not entirely linear.

Table X Alpha Probability Findings

Alpha probability analyses of Chi-square were run in chaining indexes of sex, age, ethnicity, and of Indian pupils in integrated and non-integrated classroom situations with Morale, Perceived Social Achievement, Teaching Dimensions of Learning Behavior, and the three subscales: Protestant Ethic, Family Orientation, and Conformity to Classroom. The Morale, Perceived Social Achievement, and Teaching Dimensions of Learning Behavior indexes, like those of the three subscales, were the factors revealed for the Total Sample. (See Appendixes IV-i, V-i, VI-viii.) Table X provides Chi-square significance levels and Gamma indications for the variables tested. Appendixes IX - XVIII give the Chi-square tables reported to at least a .05 level of significance.



The Chi-square test is a measurement for levels of significance of differences in frequencies among independent groups which allows for relationships or non-relationships of the variables involved. The method does not provide effects of order; therefore statements presented are a result of visual examination of Gamma directionality and of the cells of the Chi-square tables.

Chi-Squares with Morale Indications, Table X. Sex, age, ethnicity, and Indian pupils in integrated or non-integrated classrooms reveal significant Chi-squares with certain of the Morale indices, (Appendix IX).

1. Sex with the Morale subscales reveals Chi-square significances for Teacher Morale, School Morale, and School Dropout Morale.

- 1.1 The Sex with Teacher Morale analysis reveals a higher trend of endorsement by boys and a lower endorsement by girls. Chi-square is equal to 10.71, and is significant at the .004 level of significance with a Gamma of .21, Appendix IX.

Since the Teacher Morale scale for the Total Structural Analysis, Appendix IV-i, reveals frustration in its content, it seems that boys tend to evidence more frustration in morale estimates of teachers than do girls.

- 1.2 Sex with School (As an Institution) Morale reveals a like trend of more endorsement by boys and less by girls. Chi-square is equal to 17.16 and is significant at .0002 level of significance with a Gamma of .27, Appendix IX.

This scale (also part of Appendix IV-i) is pro-school in content; therefore, the findings point to the concept that boys in the sample seem more supportive of the school as an institution than girls.

- 1.3 Sex with School Dropout Morale supports this. Chi-square is equal to 19.14, and is significant at .0001 level with a Gamma of -.28, Appendix IX.

Boys in this analysis seem slightly less inclined to endorse school dropout than girls. (See both "Endorsement" and "Sometimes Endorsement" of the table, Appendix IX.)

Table X

Alpha Probability Levels from Chi Square Tests

Morale					Perceived Social Achievement							Teaching Dimensions of Learning Behavior												
Teacher Morale	Peer Morale	School As An Institution Morale	School Dropout Morale	School Anxiety Morale	Self Expressiveness PSA	Self Perception PSA	Sig. Others: Family PSA	Sig. Others: Neighborhood Friends PSA	Learning-Others PSA	Learning Relevance PSA	Learning-Self-Others PSA	Expressive TDLB	Expressive-Helping TDLB	Expressive-Liking Task TDLB	Authority TDLB	Authority-Task TDLB	Task TDLB	Teacher-Pupil Interaction TDLB	Teacher-Pupil Task TDLB	Small Group TDLB	Protestant Ethic	Family Orientation	Conformity to Classroom	
Sex	.21 <sup>*</sup> 10.71 .004	.09 1.94 .37	.27 17.16 .0002	-.28 19.14 .0001	.00 .72 .69	-.02 .23 .88	-.13 2.76 .25	-.08 4.75 .09	.03 .60 .73	-.02 .82 .66	-.10 3.17 .20	-.03 .74 .68	-.02 .66 .71	-.03 .56 .75	-.01 .57 .74	-.10 .49 .78	.06 .92 .62	-.09 3.78 .15	.00 .00 .99	.01 1.20 .54	-.10 3.02 .21	.22 7.24 .02	.05 2.14 .34	-.06 .98 .61
Age	-.25 50.59 .0000	-.18 24.75 .001	-.23 40.78 .0000	.20 22.84 .003	-.25 37.24 .0000	-.04 14.41 .07	-.04 12.84 .11	.22 22.89 .003	.11 13.08 .10	.01 16.15 .04	.03 13.57 .09	.25 32.37 .0001	-.13 39.12 .0000	.14 26.93 .0007	-.16 33.23 .0001	-.09 7.37 .11	-.12 23.13 .003	-.10 10.90 .20	-.03 8.12 .42	.05 3.12 .92	-.01 7.33 .50	-.15 11.78 .01	-.26 42.72 .0000	-.09 14.19 .07
Ethnicity	-.02 .31 .85	-.31 16.64 .0002	.19 6.07 .04	.07 1.24 .53	-.29 11.77 .002	-.31 15.98 .0003	-.60 87.18 .0000	.33 17.86 .0001	.06 .71 .70	-.66 78.93 .0000	.14 8.77 .01	.40 24.66 .0000	-.01 .43 .80	.14 4.11 .12	-.26 10.09 .006	-.07 .14 .92	-.57 64.32 .0000	-.31 16.40 .0003	-.19 7.53 .02	.23 7.79 .02	.31 14.64 .0007	-.67 60.67 .0000	-.48 38.24 .0000	-.51 48.62 .0000
Indian	.02 .40 .81	-.04 .09 .95	.06 1.57 .45	.01 5.22 .07	.16 2.09 .35	-.13 4.94 .08	-.30 3.36 .18	.00 .11 .94	.01 .39 .81	-.40 6.34 .04	.26 3.24 .19	-.04 1.80 .40	.00 .56 .75	.26 3.18 .20	-.16 2.25 .32	-.06 .00 .99	-.12 4.99 .08	.18 1.23 .54	-.06 .17 .91	.17 2.27 .32	.12 1.74 .41	-.17 .43 .80	-.13 .93 .62	.08 .54 .76

\* Upper number in each cell refers to Gamma, middle number to Chi Square equivalences and lower number to level of significance

\*\* NOTE: Particularly high Gamma indications in "boxed" areas.

2. Age with the Morale subscales reveals Chi-square significances for all Morale subscale indices (Table X, also Appendix X, all parts).

- 2.1 Age with Teacher Morale reveals a high level of Chi-square significance, .0000 with a Gamma of  $-.25$ . Chi-square is equal to 50.59, Appendix X-ii.

Eleven year olds and those younger appear to endorse morale estimates of their teachers less than do the other ages tested.

- 2.2 Age with Peer Morale is significant at .001 level with a Gamma of  $-.18$ . Chi-square is equal to 24.75. The age patterns of endorsement of the Peer Morale subscale resemble those for the Teacher Morale subscale, Appendix X-i.

Fifteen year olds and those older, however, do seem more inclined to endorse their peers, and eleven year olds and younger seem less inclined to endorse their peers.

- 2.3 Age with School (As an Institution) Morale is significant at .0000 level with a Gamma of  $-.23$ . Chi-square is equal to 40.78, Appendix X-i.

The highest School (As an Institution) Morale is revealed by fourteen year olds and those older, and the lowest by eleven year olds and younger.

- 2.4 Age with School Dropout Morale is significant at .003 level of significance with a Gamma of  $.20$ . Chi-square is equal to 22.84, Appendix X-iii.

The table "Age with School Dropout Morale" reveals that among all ages reported who endorsed this index and who endorsed it "sometimes," eleven and twelve year olds appear to have the highest endorsement.

As the School Dropout Morale factors do indicate disenchantment with school (Appendix IV-i), these younger pupils appear to need help towards more positive views.

- 2.5 Age with School Anxiety Morale is significant at .0000 level of significance, with Chi-square equal to 37.24, and Gamma equal to  $-.25$ , Appendix X-ii.

Fourteen year olds and those older seem more anxious about school than the other age groups tested; however

all age groups endorse this at least "sometimes", Appendix X-ii. It will be recalled that the School Anxiety factor items included: "getting ahead in school work", "feeling nervous about school work", and "feeling unhappy about the way I get along with members of my class". (See Appendix IV-i.)

3. Ethnicity with Morale subscales reveal Chi-square significances for Peer Morale, School (As an Institution) Morale, and School Anxiety Morale, (Table X, also Appendix XIV).

- 3.1 Ethnicity with Peer Morale is significant at .0002 level of significance, with Chi-square equal to 16.64, and a Gamma of -.31, Appendix XIV.

Indian pupils seem to show more support of Peer Morale than do non-Indian pupils tested.

- 3.2 Ethnicity with School (As an Institution) Morale is significant at .04 level of significance. Chi-square is equal to 6.07 with a Gamma of .19, Appendix XIV.

Both Indians and non-Indians indicate endorsement and endorsement "sometimes" of School (As an Institution) Morale. Indian pupils tend to indicate "No Endorsement" 45.1% while non-Indians tend more to "Endorse" the factor 40.7%.

- 3.3 Ethnicity with School Anxiety Morale is significant at .002 level of significance. Chi-square is equal to 11.77 with a Gamma of -.29, Appendix XIV.

Both Indian and non-Indian pupils seem to endorse School Anxiety Morale at least "sometimes."

Chi-Square Analyses with Perceived Social Achievement Indications, Table X. Age, ethnicity, and Indian pupils in integrated and non-integrated classrooms reveal significant Chi-squares with certain of the Perceived Social Achievement indices, (Appendix XI).

1. Age with the PSA subscales of Significant Others-Family, Learning-Others, and Learning-Self-Others are significant at least at the .04 level, Appendix XI.

- 1.1 Age with Significant Others-Family PSA is significant at .003 level of significance. Chi-square is equal to 22.89 with a Gamma of .22.

All age groups seem to endorse the family PSA at least "sometimes."

- 1.2 Age with Learning-Others PSA is significant at .04 level of significance. Chi-square is equal to 16.15 with a Gamma of -.01, Appendix XI.

All age groups tested seem to endorse the PSA Learning-Others factor at least "sometimes." Since the factor set deals with "feeling the same way classmates feel about going to school, learning English, and liking learning in school," (concepts which deal with peer rapport in learning), this finding might have been expected for the age groups tested. (See Appendix V-i for the factors involved in Learning-Others PSA.)

- 1.3 Age with Learning-Self-Others PSA is significant at .0001 level with Chi-square equal to 32.37, and a Gamma of .25, Appendix XI.

This factor set deals with peer esteem for "being smart," "helping classmates decide what to do in school," and "whether or not classmates like you." Eleven year olds and those younger are more inclined to endorse this; twelve, thirteen and fourteen year olds indicate a "sometimes" endorsement; and fifteen year olds and those older are somewhat less inclined to endorse the factors.

2. Ethnicity with the PSA subscales: Self Expressiveness, Self Perception, Significant Others-Family, Learning-Others, Learning-Relevances, and Learning-Self-Others are significant at least at the .01 level of significance, (Table X, also Appendix XV).

- 2.1 Ethnicity with Self Expressiveness PSA is significant at .0003 level of significance. Chi-square is equal to 15.98 with a Gamma of -.31, Appendix XV.

Both Indians and non-Indians admit to self expressiveness, that is "liking to tell friends who live near about schoolwork," at least "sometimes."

- 2.2 Ethnicity with Self Perception PSA is significant at .0000. Chi-square is equal to 87.18 with a Gamma of -.60, Appendix XV.

The Self Perception PSA is actually a "Self Perception - Time Task Dimension" dealing with the question, "How often are you early or on time to school or class?"

Indian pupils tested seem more inclined to admit to "being



on time" when their endorsements are considered. Non-Indian pupils admit to this "sometimes."

The table is repeated here due to the high Gamma indication.

Ethnicity with Self Perception  
Re: Time Task Dimension

	Endorsement	Sometimes	No Endorsement
Non-Indians	<u>70</u> /13.3	<u>391</u> /74.3	<u>65</u> /12.4
Indians	<u>62</u> /51.2	<u>50</u> /41.3	<u>9</u> / 7.4
$\chi^2 = 87.18$ Sig. @ .0000 Gamma = -.60			

- 2.3 Ethnicity with Significant Others-Family PSA is significant at .0001 level. Chi-square is equal to 17.86 with a Gamma of .33, Appendix XV.

Non-Indian pupils seem slightly more highly endorsing of their families than do Indian pupils.

- 2.4 Ethnicity with Learning-Others PSA is significant at .0000. Chi-square is equal to 78.93 with a Gamma of -.66, Appendix XV.

This factor set deals with "feeling the same way about school as one's classmates, learning English, and liking learning at school with one's schoolmates".

Indian pupils seem more highly endorsing of learning with their peers in these regards than do non-Indian pupils; although non-Indian pupils endorse these "sometimes."

The table is reproduced here because of the high Gamma indication.

### Ethnicity with Learning-Others PSA

	Endorsement	Sometimes	No Endorsement
Non-Indians	<u>125/23.8</u>	<u>264/50.2</u>	<u>137/26.0</u>
Indians	<u>78/64.5</u>	<u>36/29.8</u>	<u>7/ 5.8</u>
$\chi^2 = 78.93$ Sig. @ .0000 Gamma = -.66			

- 2.5 Ethnicity with Learning-Relevances PSA is significant at .01. Chi-square is equal to 8.77 with a Gamma of .14, Appendix XV.

Indian pupils are slightly less inclined than are non-Indian pupils to endorse that they receive homework or class help from their peers.

- 2.6 Ethnicity with Learning-Self-Others PSA is significant at .0000. Chi-square is equal to 24.66 with a Gamma of .40.

Non-Indian pupils are slightly more inclined than are Indian pupils to admit to esteem, help, and liking of classmates, Appendix XV.

3. Ethnicity with Indian Pupils in Integrated and Non-Integrated Classrooms is significant with Learning-Others PSA at the .04 level of significance, Table X, also Appendix XVIII.

- 3.1 Chi-square of ethnicity with Indian Pupils in Integrated and Non-Integrated Classrooms is equal to 6.34 with a Gamma of -.40, significant at .04 level, Appendix XVIII.

This table deals with the Indian population of the sample only in relation to the classroom situation. It is interesting that this was the only significant Chi-square revealed for the Morale, PSA, and TDLB indices. (See Table IX.)

Learning-Others PSA deals with "feeling the same way about school as one's classmates, learning English, and liking learning at school with one's schoolmates".

Indian pupils in non-integrated classroom situations reveal higher endorsement of this factor set than do Indian pupils in integrated classrooms.

Integrated and Non-Integrated Indian  
Pupils with Learning-Others PSA

	Endorsement	Sometimes	No Endorsement
Integrated Indian Pupils	<u>24</u> /52.2	<u>17</u> /37.0	<u>5</u> /10.9
Non-Integrated Indian Pupils	<u>54</u> /72.00	<u>19</u> /25.3	<u>2</u> / 2.7
$\chi^2 = 6.34$ Sig. @ .04 Gamma = -.40			

Chi-Squares with Teaching Dimensions of Learning Behavior Indications, Table X. Age and ethnicity reveal significant Chi-squares with certain of the Teaching Dimensions of Learning Behavior indices.

1. Age with the TDLB subscales of Expressive, Expressive-Helping, Expressive-Liking-Task, and Authority-Task are significant at least at the .003 level of significance, Table X, also Appendix XII.

- 1.1 Age with Expressive TDLB is significant at the .0000 level. Chi-square is equal to 39.12 with a Gamma of -.13, Appendix XII.

Pupils who are eleven years old or younger, and those who are fifteen years old or older tend to indicate less endorsement of expressive teaching dimensions which deal with the teacher "making classwork fun", "being fair in decisions about pupils", and "using teacher ideas, ideas in books and pupil ideas". (For the factors involved in the Expressive TDLB, see Appendix VI-viii.)

Pupils who are fourteen years old seem to like this kind of teaching behavior.

- 1.2 Age with Expressive-Helping TDLB is significant at .0007 level of significance. Chi-square is equal to 26.93 with a Gamma of .14, Appendix XII.

All age groups tested seem to want more expressive-helping dimensions of teacher behavior.

- 1.3 Age with Expressive-Liking-Task TDLB is significant at .0001 level, with Chi-square equal to 33.23 and a Gamma of -.16, Appendix XII.

All pupils indicate at least a "sometimes" endorsement of this factor set which deals with teacher "likes or dislikes of pupils, and assignment of new work before right answers to old work are given". Eleven year olds seem slightly more inclined to indicate non-endorsement; however this may be due to the bifurcation of both "teacher likes and dislikes" apparent in the factor set.

- 1.4 Age with Authority-Task TDLB is significant at .003 level with Chi-square equal to 23.13 and a Gamma of -.12, Appendix XII.

All pupils indicate at least a "sometimes" endorsement of this factor set. The Authority-Task dimension factors deal with directive teacher behavior such as "changing assignments because pupils didn't like them, changing 'his' mind when pupils did not like something, and action regarding teaching the class something new when the class doesn't understand". (See Appendix VI-viii.)

2. Ethnicity with the TDLB subscales of Expressive-Liking-Task, Authority-Task, Task, Teacher-Pupil-Interaction, and Small Group are significant at least at the .02 level of significance. (Table X, also Appendix XVI.)

- 2.1 Ethnicity with Expressive-Liking-Task TDLB is significant at .006. Chi-square is equal to 10.09 with a Gamma of -.26, Appendix XVI.

Both Indian and non-Indian pupils tend to endorse this concept at least sometimes.

- 2.2 Ethnicity with Authority-Task TDLB is significant at .0000 level of significance with Chi-square equal to 64.32, and a Gamma of -.57, Appendix XVI.

Indian pupils seem less inclined to endorse this factor set which deals with teacher leniency regarding changing assignments or 'his' mind because the pupils did not like something, and behavior of the teacher when teaching something new and the class doesn't understand.

The table is reproduced here because of the high Gamma indication.

Ethnicity with Authority-Task TDLB

	Less Endorsement	Sometimes	More Endorsement
Non-Indians	<u>86</u> /16.6	<u>331</u> /63.8	<u>102</u> /19.7
Indians	<u>62</u> /50.0	<u>52</u> /41.9	<u>10</u> / 8.1
$\chi^2 = 64.32$ Sig. @ .0000 Gamma = -.57			

- 2.3 Ethnicity with Task TDLB is significant at .0003 with Chi-square equal to 16.40, and a Gamma of -.31, Appendix XVI.

Both Indian and non-Indian pupils tend to endorse the Task Dimension of Learning Behavior at least "sometimes". This factor set deals with "using a certain kind of work more than once, review of work before starting new work, and showing the teacher what 'you' know by writing or telling an answer".

- 2.4 Ethnicity with Teacher-Pupil-Interaction TDLB is significant at .02 level, with Chi-square equal to 7.53, and a Gamma of -.19, Appendix XVI.

Both Indian and non-Indian pupils seem to endorse this dimension at least "sometimes". This factor set deals with "what the teacher does when he and the pupils disagree about something, and how exercises and test papers are corrected".

- 2.5 Ethnicity with Small Group TDLB is significant at .0007 level, with Chi-square equal to 14.64 and a Gamma of .31, Appendix XVI.

Both Indian and non-Indian pupils seem to endorse this dimension at least "sometimes".

Chi-Squares with Protestant Ethic, Family Orientation, and Conformity to Classroom Indications, Table X. Sex, age, and ethnicity reveal significant Chi-squares with the Protestant Ethic subscale. Age and ethnicity are significant with Family Orientation; and Ethnicity is



significant with Conformity to Classroom.

1. Sex with the Protestant Ethic subscale is significant at .02 level of significance. Chi-square is equal to 7.24 with a Q Coefficient of .22, Appendix IX.

Both boys and girls tend to give less endorsement to the Protestant Ethic of family expectation for academic success, personal endorsement of school work accomplishment, and being early or on time to class, than one might expect of young people of a society endorsing such traditions. Boys do tend, however, to endorse the Ethic more than girls. (Refer to actual numbers of the table "Sex with Protestant Ethic", Appendix IX.)

This analysis was conducted with both Indian and non-Indian pupils.

2. Age with Protestant Ethic is significant at .01 level, with Chi-square equal to 11.78 and a Gamma of -.15, Appendix XIII.

All ages tested, i.e. eleven year olds or younger through fifteen year olds and older tend towards less endorsement of the Ethic.

Thirteen year olds and those older, however, are more inclined to favor the Ethic than are those twelve years old and younger. (Refer to actual numbers of the table "Age with Protestant Ethic", Appendix XIII.)

Both Indian and non-Indian pupils were included in this analysis.

3. Ethnicity with Protestant Ethic is significant at .0000 level with Chi-square equal to 60.67 and a Q Coefficient of -.67, Appendix XVII.

Non-Indian pupils tend to give less endorsement to the Ethic and Indian pupils, more endorsement. The table is reproduced here due to the high Q Coefficient.

#### Ethnicity with Protestant Ethic

	More Endorsement	Less Endorsement
Non-Indians	<u>173</u> /32.9	<u>353</u> /67.1
Indians	<u>87</u> /71.9	<u>34</u> /28.1
$\chi^2 = 60.67$		
Sig. @ .0000		
Q Coefficient = -.67		

4. Age with Family Orientation is significant at .0000. Chi-square is equal to 42.72 with a Gamma of  $-.26$ , Appendix XIII.

Fourteen year olds and those older tend more to endorse the family indices: affectivity, family success, doing things and going places with the family, family liking to do what the pupil likes to do, family caring about pupil failure at school, and pupil concern over boarding school or home placement.

This finding seems to indicate that peer social adjustment problems which tend to separate the adolescent from family orientations are taking place before the fourteenth year. By age fourteen, these pupils may be once again aligning themselves with their families in their thoughts.

This analysis applies to both Indian and non-Indian pupils.

5. Ethnicity with Family Orientation is significant at .0000, with Chi-square equal to 38.24 and a Gamma of  $-.48$ , Appendix XVII.

Non-Indians tend towards "No Endorsement" and Indians towards "Endorsement" of their families.

The table is reproduced here to emphasize the high Gamma indication.

Ethnicity with Family Orientation

	Endorsement	Sometimes	No Endorsement
Non-Indians	<u>145/27.6</u>	<u>127/24.2</u>	<u>253/48.2</u>
Indians	<u>64/53.3</u>	<u>32/26.7</u>	<u>24/20.0</u>
$\chi^2 = 38.24$ Sig. @ .0000 Gamma = $-.48$			

6. Ethnicity with Conformity to Classroom Situation is significant at .0000 level of significance with Chi-square equal to 48.62, and a Gamma of  $-.51$ , Appendix XVII.

Non-Indians tend to indicate "no" endorsement of classroom conformity, and Indians tend to endorse this subscale.

The subscale deals with classmate esteem for "being smart",

"doing what the rest of the class is doing", and "classmates feeling the same way a pupil feels about going to school".

The table is reproduced here to point to the high Gamma indication.

#### Ethnicity with Conformity to Classroom Situation

	Endorsement	Sometimes	No Endorsement
Non-Indians	<u>108</u> /20.7	<u>198</u> /37.9	<u>217</u> /41.5
Indians	<u>60</u> /50.4	<u>38</u> /31.9	<u>21</u> /17.6
$\chi^2 = 48.62$ Sig. @ .0000 Gamma = -.51			

SUMMARY OF NEEDS REVEALED FROM ALPHA PROBABILITY  
 FINDINGS: SEX, AGE, ETHNICITY, INDIAN PUPILS  
 IN INTEGRATED AND NON-INTEGRATED CLASSROOMS WITH  
 MORALE, PSA, AND TDLB, TABLE X.

#### SEX DESIGNATED NEEDS

1. Boys need help with their morale estimates of teachers.
2. Girls need more commitment to the school as an institution.
3. Both boys and girls need help in adjusting to the Protestant Ethic indications of work success and prompt time commitments.
4. Girls need more help than boys with the Protestant Ethic indices.

These needs apply to both Indian and non-Indian pupils.

#### AGE DESIGNATED NEEDS

5. Eleven year olds and those younger need better morale commitment to their teachers.
6. Eleven year olds and those younger need better peer morale.
7. Eleven year olds and those younger need better commitment to the school as an institution.

8. Thirteen year olds and those younger need help in family orientations.
9. Fourteen year olds, particularly, need help with school anxiety.
10. All age groups tested need help with concepts of disenchantment with school and thoughts of "dropping out of school."
11. All age groups sampled need help in better understandings of teacher likes and dislikes of pupils, and in their perceptions of these coupled to assignment of new work by the teacher before right answers to old work are achieved.

Both Indian and non-Indian pupils were included in these age-designated needs.

#### ETHNICITY DESIGNATED NEEDS

12. Both Indian and non-Indian pupils need help with school anxiety.
13. Indian pupils want more flexibility of teaching behavior as expressed in the Authority-Task-Dimensions: teacher willingness to change assignments when pupils don't like them, teacher changing his mind when pupils don't like his concepts, and teacher attention to teaching "something new" when the class doesn't understand. Expressive teaching behaviors seem to be those needed.
14. Indian pupils need more help in understanding the value of working in class and upon homework assignments with peers.
15. Indian pupils in integrated school situations need better learning-others identifications to realize social achievement.
16. Both Indian and non-Indian pupils sampled apparently need improved family identifications.
17. Both Indian and non-Indian pupils want more Expressive-Helping Behaviors from their teachers.
18. While both Indian and non-Indian pupils need help with Protestant Ethic time commitments, non-Indian pupils may need as much help with these as Indian pupils.

Table X Alpha Probability Findings

A check was made upon the findings revealed in Table X to look for possible relationships between Sex, Age, Ethnicity, and Indian Pupils in Integrated and Non-Integrated Classrooms. Table XI reveals that both Sex and Age are related to the Ethnicity findings.

Table XI

Alpha Probability Chi-Square Indices  
Re  
Sex, Age, Ethnicity, and Indian Pupils  
in Integrated and Non-Integrated Classrooms

	Age	Ethnicity	Indian Integration
Sex	-.07*	.25	.22
	4.01	5.87	1.06
	.40	<u>.05</u>	.58
Age		.38	-.06
		37.38	3.58
		<u>.0000</u>	.46

\*Upper number in each cell refers to Gamma, middle number to Chi-square equivalence, and lower number to level of significance.

The Sex with Ethnicity Chi-square analysis simply reveals that there were slightly more boys than girls in the non-Indian sample, and more girls than boys in the Indian sample, Appendix XX.

Age with Ethnicity is significant at .0000 level of significance. Chi-square is equal to 37.38 with a Gamma of .38. This analysis indicates that the total sample is predominantly non-Indian, which was known previously. (See the row percentage designations of "Age with Ethnicity" table, Appendix XX.) Among non-Indian pupils sampled,



twelve, thirteen, and fourteen year olds predominate; while in the Indian sample, twelve, thirteen, fourteen, and fifteen year olds and those older predominate. (See columnar percentages, "Age with Ethnicity" table, Appendix XX.)

A complete check was made of Ethnicity with age and sex controlled for all indexes tested in Part I of the study: Morale, Perceived Social Achievement, Teaching Dimensions of Learning Behavior, and the subscales Protestant Ethic, Family Orientation, and Conformity to Classroom. Again chaining Chi square analyses were used. Tables XII and XIII reveal the Alpha probability findings. Shown on the tables are Chi square equivalences, levels of significance, and Gamma indications. The Chi square tables which are significant at least at the .05 level of significance are Appendixes XXI - XXVI.

The complete analysis report is available, although not included here. The needs resulting from the analyses are presented.

SUMMARY OF NEEDS REVEALED FROM ALPHA PROBABILITY  
FINDINGS FOR TABLES XI AND XII: ETHNICITY WITH  
MORALE, PERCEIVED SOCIAL ACHIEVEMENT, TEACHING  
DIMENSIONS OF LEARNING BEHAVIOR, PROTESTANT ETHIC,  
FAMILY ORIENTATION, AND CONFORMITY TO CLASSROOM,  
INCLUDING AGE AND SEX CONTROLS

INDIAN DESIGNATED NEEDS

1. Indian girls, fourteen years and older, need to gain better peer morale perceptions.
2. Indian boys, twelve years and younger, need better self perception in the time-task oriented sense.
3. Thirteen year old Indian boys and those younger seem to need more flexibility of teachers re changing assignments or teacher opinion to meet student liking.



Table XIII

Secondary Alpha Probability Chi Square Control Indices:  
 Ethnicity with Teaching Dimensions of Learning Behavior, Protestant Ethic,  
 and Conformity to Classroom, Showing Sex and Age Designations

Ethnicity	TEACHING DIMENSIONS OF LEARNING BEHAVIOR																							
	Expressive						Expressive - Helping						Expressive - Liking - Task						Authority					
	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female
	-.38*	.15	.30	-.14	.24	-.01	.29	.38	-.01	.16	-.11	.23	-.47	-.10	-.23	-.38	-.05	-.21	.01	-.07	.05	-.68**	.29	.30
	2.70	1.40	1.40	.68	1.32	.11	1.73	6.03	1.66	.64	.28	1.08	3.34	.42	1.35	4.73	.12	1.34	.26	.06	.07	6.86	.00	.48
	.25	.49	.49	.70	.51	.94	.41	.04	.43	.65	.86	.38	.06	.80	.80	.09	.93	.90	.87	.74	.63	.03	.50	.24
																						1.00	-.004	-.57
																						5.72	-.004	-.57
																						7.30	-.004	-.57
																						.16	.05	9.87
																						.90	.007	5.34
																						.97	.007	.98

Ethnicity	TEACHING DIMENSIONS OF LEARNING BEHAVIOR																							
	Task						Teacher - Pupil - Interaction						Teacher - Pupil - Task						Small Group					
	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female
	-.38	-.27	-.25	-.38	-.38	-.15	.03	-.24	.05	-.34	-.45	-.02	.06	.23	.26	.29	-.22	.33	.59	.34	-.14	.86	.22	.16
	2.03	1.53	2.55	2.61	11.11	5.01	.49	1.15	3.04	4.03	3.87	.19	.06	3.37	6.16	1.86	1.43	7.43	9.37	1.45	.85	24.36	1.48	.70
	.36	.46	.27	.27	.003	.08	.78	.56	.21	.13	.14	.90	.96	.16	.04	.39	.49	.02	.009	.48	.64	.0000	.47	.70

Ethnicity	Protestant Ethic								Family Orientation								Conformity to Classroom							
	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female	Young Male	Middle Male	Older Male	Young Female	Middle Female	Older Female						
	-.48	-.56	-.73	-.81	-.53	-.70	-.60	-.21	-.37	-.53	-.55	-.35	-.49	-.11	-.67	-.40	-.49	-.53						
	1.98	2.63	11.47	16.98	3.46	12.68	7.96	.69	3.42	7.70	5.72	4.43	4.88	1.43	14.64	4.87	4.88	12.68						
	.37	.03	.002	.0002	.03	.0002	.018	.70	.18	.02	.05	.10	.08	.48	.0007	.08	.001	.0002						

\* Upper number in each cell refers to Gamma, middle number to Chi square equivalence, and lower number to level of significance.

\*\* Note: Particularly high Gamma indications in "bonded" areas.

\*\*\* Age designations are:  
 Young = 12 yr. or under  
 Middle = 11 yr.  
 Older = 14 yr. or older

#### NON-INDIAN DESIGNATED NEEDS

4. Non-Indian boys, twelve years old and younger, need to gain better peer morale perceptions.
5. Thirteen year old non-Indian males need better Significant Other - Neighborhood Friends' perceptions.
6. Thirteen year old non-Indian males need more endorsement of the PSA Learning-Others factor set.

This factor set deals with "feeling the same way as classmates feel about going to school, wanting to learn good English, and liking learning at school". (See Appendix V-i.)

7. Non-Indian males, thirteen years and younger, need help in perceiving the reasons for teachers using the Authority-Task Dimension of Behavior, i.e. "the teacher perhaps not changing assignments or his mind when pupils signify they do not like these, and why the teacher proceeds to something new when the class doesn't understand the old work".
8. Thirteen year old non-Indian boys need more endorsement of the Expressive-Helping Dimension of Teaching Behavior.

This factor set deals with perceptions of the kind of teacher behavior that offers help to the pupil, and makes sure the pupil learns the facts but cares how "he" feels; therefore, teacher help seems the key element for encouraging more endorsement by thirteen year old non-Indian boys of this dimension. (See Appendix VI-vii.)

9. Non-Indian boys, fourteen years and older, and non-Indian girls, who are thirteen years old, need help with Conformity to Classroom.

#### BOTH INDIAN AND NON-INDIAN DESIGNATED NEEDS

10. Both Indian and non-Indian pupils seem to need help with Protestant Ethic concepts.

#### Study Group I and II Analysis re Part I Study Testing Instruments

The Introduction to this Report provides information regarding Study Group I and II implications. It will be recalled that Study Group I was made up of pupils in classrooms of teachers who attended an intercultural class offered by the Faculty of Education, the University of

Calgary. The teachers, who volunteered to attend the class, were from rural school districts surrounding the City of Calgary, and from the non-integrated Indian Affairs schools at Morley and Cluny. Study Group II was a group of teachers, who also volunteered to assist in the study, but who did not attend the class. To the extent possible, both groups of pupils received the tests of the entire study.

Table XIV shows the Chi-square equivalences, levels of significance, and Gamma indications for the two study groups in relation to sex and ethnicity of the pupils tested.

Table XIV  
Study Group Designations in Relation to  
Sex and Ethnicity of Pupils Tested

	Sex	Ethnicity
Study Group	-.00*	-.56
I and II	.003	35.00
Designations	.99	<u>.0000</u>

\*Upper number in each cell refers to Gamma, middle number to Chi-square equivalence, and lower number to level of significance.

Study Group assignment of Teachers apparently has little relation to sex of pupils involved; however the Study Group designations of teachers does bear relation to ethnicity of the pupils.

Chi-square information for Study Group Designations with Ethnicity is presented in Table XV. Chi-square is equal to 35.00, and significant at .0000 with a Q Coefficient of -.56.



Table XV  
Study Group Designations with Ethnicity

	Non-Indian	Indian
Study Group II	<u>246</u> /45.7	<u>97</u> /75.2
Study Group I	<u>292</u> /54.3	<u>32</u> /24.8
$\chi^2 = 35.00$ Sig. @ .0000 Q Coefficient = -.56		

The findings seem to disprove the worth of the Intercultural Class in regard to teacher influence upon Indian pupils. Study Group II teachers, who did not take the Intercultural Class, seem to have had more influence upon the Indian pupils than did Study Group I teachers. Study Group I teachers, on the other hand, had influence upon the non-Indian pupils.

Three suppositions might be made regarding this unexpected finding:

- I. The Intercultural Class had little or no influence upon the teachers who attended.
- II. The teachers, who volunteered for Study Groups I and II, were particular types of individuals: e.g. those who held fairly fixed attitudes towards Indian and non-Indian pupils, -- attitudes not easily changed. This example leads one to speculate that teachers pro-Indian pupils agreed to serve in Study Group II, and those not so favorably inclined agreed to take the course, perhaps because they sensed a need for it.
- III. The pupils involved held particular concepts regarding their learning which may have biased the results.

Part II of the study deals with the first supposition, and gives some indication that the Intercultural Class was favorably received by the teachers who took the course. The second supposition could be at

least partially valid, if the adjective survey conducted before the course began is any indication of these teachers' attitudes; however, taking the class presumably did influence the teachers, according to Part II study findings. Supposition Three can be assessed by the data reported upon in Part I of the study. Supposition Two can also be partially assessed by the data, at least from the pupils' point of view. These thoughts led to a further search of the data to seek reasons for this discrepancy finding because a major assumption of the research was that the Intercultural Class would provide some change in teacher behavior, which would in turn affect Indian pupils in the classroom.

Table XVI Findings. Table XVI provides Alpha Probability Indications as Chi-Square Controls for Study Groups I and II with Morale, Perceived Social Achievement, Teaching Dimensions of Learning Behavior, and the subscales: Protestant Ethic, Family Orientation, and Conformity to Classroom. While the subscales reveal no significant Chi-square implications, certain parts of the Morale, Perceived Social Achievement, and Teaching Dimensions of Learning Behavior scales do provide indications of ethnic differences when measured with Study Groups I and II. Appendixes XXVII - XXIX-ii include the Chi-square tables of those parts of the scales which were significant.

Considering the Chi-square analyses, the following pupil perceptions related to Study Groups I and II are revealed:

1. There is a tendency for Study Group II pupils to give "no endorsement" or "endorsement only sometimes" to morale concepts of their teachers, while Study Group I pupils tend to "endorse" their teachers "at least sometimes". (See Appendix XXVII "Study Groups I and II with Teacher Morale" Chi-square analysis.)

Table XVI

Alpha Probability Indications as Chi Square Controls  
for Study Groups I and II with  
Morale, Perceived Social Achievement, Teaching Dimensions of Learning Behavior,  
Protestant Ethic, Family Orientation, and Conformity to Classroom

	Morale					Perceived Social Achievement					Teaching Dimensions of Learning Behavior										Small Group	Protestant Ethic	Family Orientation	Conformity to Classroom Situation
	Teacher Morale	Peer Morale	School Morale	School Dropout Morale	School Anxiety Morale	Self Expressiveness	Self Perception	Sig Other Family	Sig Other Neighbor Friends	Learning Others	Learning Relevancies	Learning Self Others	Expressive	Expressive Helping	Expressive Liking Task	Authority Task	Authority Task	Teacher Pupil Interaction	Teacher Pupil Task					
Study Groups I & II	-.40* 42.25 .0000	-.03 .33 .0000	-.30 23.22 .0000	.12 5.57 .06	-.11 2.98 .22	.20 10.78 .004	.29 14.43 .0007	.02 .19 .90	.00 .52 .77	.20 10.50 .002	-.02 .19 .90	-.04 .45 .79	-.33 27.61 .0000	.22 13.96 .001	-.26 17.06 .0002	-.14 1.18 .55	.18 11.34 .002	-.09 2.02 .16	.16 17.92 .0001	.08 2.51 .28	-.34 63.17 .0000	.10 1.44 .48	.08 4.38 .11	.10 3.13 .20

\* Upper number in each cell  
refers to Gamma, middle  
number to Chi square equi-  
valence, and lower number to  
level of significance.

This analysis supports morale engendering by Study Group I teachers and seems to negate Supposition II.

2. Pupils in Study Group II tend to non-endorsement of School (As an Institution) Morale, while Study Group I pupils seem to endorse this factor set. (Appendix XXVII, "Study Groups I and II with School Morale" Chi-square analysis.)

Because the test was given to the pupils in February of the school year, it can be held that pupils in Study Group I could have been positively influenced by their teachers, teachers who were taking the Intercultural Class. This analysis seems to question Supposition III.

3. Pupils of both Study Groups seem to indicate self expressiveness at least sometimes. (Appendix XXVIII "Study Groups I and II with Self Expressiveness PSA" analysis.)

No particular finding re the Suppositions is revealed.

4. Pupils of both Study Groups tend to indicate self perception at least sometimes. (Appendix XXVIII "Study Groups I and II with Self Perception PSA" analysis.)

No particular finding pertaining to the Suppositions is revealed.

5. Both Study Group pupils tend to endorse pro-Learning-Others orientations at least sometimes. Study Group II is slightly more inclined to endorse this factor set. (Appendix XXVIII "Study Groups I and II with Learning-Others PSA" analysis.)

This finding may have slightly influenced Study Group II pupil tendencies to be more positively oriented. The finding has to do, however, with peer alliances rather than with teacher influences. (Supposition III may be partially supported.)

6. Pupils of Study Group I seem to endorse Expressive TDLB and pupils of Study Group II seem more inclined to less endorsement of this type of teaching behavior. (Appendix XXIX-i "Study Groups I and II with Expressive TDLB" Chi-square analysis.)

The endorsement of Study Group I pupils of this dimension of teaching behavior seems to point to perhaps more expressive behaviors by Study Group I teachers. Such behavior may have been gained as a result of attending the Intercultural Class. Supposition II seems partially disproved.

7. Both Study Group pupils seem to favor the presence of Expressive-Helping TDLB at least sometimes; although Study Group II pupils are less endorsive of their teachers using this dimension of teaching behavior. (Appendix XXIX-i "Study Groups I and II with Expressive-Helping TDLB" analysis.)

This analysis indicates perhaps more warm helpfulness offered in the learning situation by Study Group I teachers. Supposition II seems partially disproved.

8. Study Group I pupils seem to endorse the presence of Expressive-Liking-Task behaviors by their teachers, while pupils of Study Group II are more inclined to less endorsement of this dimension. (Appendix XXIX-i "Study Groups I and II with Expressive-Liking-Task TDLB" analysis.)

This dimension has to do with teacher likes and dislikes of pupils and their assignment of new work before right answers are given to old work. Study Group I teachers must have been attempting to give positive liking endorsements to their pupils and answers to old work before assigning new work. Once again, the Intercultural Class could have been influencing Study Group I teachers to act in a way which would bring about such perceptions by their pupils. Supposition II once again seems disproved.

9. Both Study Group pupils seem to endorse that Authority-Task TDLB is present at least sometimes. (Appendix XXIX-i "Study Groups I and II with Authority-Task TDLB" analysis.)

No particular finding pertaining to the Suppositions is revealed.

10. Study Group I pupils seem more inclined to endorse Teacher-Pupil Interaction behaviors by their teachers than do pupils of Study Group II. (Appendix XXIX-ii "Study Groups I and II with Teacher-Pupil-Interaction TDLB" analysis.)

This dimension had to do with what a teacher does when he and the pupils disagree about some fact, and how exercises or test papers are corrected. Because Study Group I pupils tend to endorse this factor set, they are indicating their teachers are fair in these regards. Once again, Supposition II seems disproved.

11. Pupils of both Study Groups seem to endorse that they participated in Small Groups at least sometimes. Study Group I pupils seem slightly less inclined to endorse this



factor set. (Appendix XXIX-ii "Study Groups I and II with Small Group TDLB analysis.")

This analysis may point to the need for teachers in Study Group I to provide more Small Group processes in teaching.

No particular finding pertaining to the suppositions is apparent.

The analyses reveal a substantial amount of information in support of teachers and pupils in Study Group I. The suppositions presented thus far seem to be disproved.

A fourth supposition emerges:

- IV. Intercultural Class study undertaken by non-Indian teachers may influence their behaviors in such a way as to bring about a subsequent change of concepts held by non-Indian pupils in their classrooms. The results of such study may even reduce bias of non-Indian pupils toward Indian pupils. Such study by teachers, however, may not have carry-over of a kind to change Indian pupils' perceptions. It may be that Indian pupils are looking for an adult figure like themselves, one who holds to at least some consummatory-liking orientations. It is with such a person that these pupils may seek to identify.

Unfortunately, this study did not provide a specific testing of Indian pupil preference for Indian teacher figures in classrooms rather than non-Indian teachers, because so few Indian teachers are available. Such a probe did not seem feasible. No actual model seems to exist to a sufficient extent to call forth such projected "wish" identifications, and yet it would only be natural for native children to desire identification with adult figures like themselves. Quite aside from consummatory-liking orientations which native teachers might hold in common with pupils, a sense of empathy because teacher and pupils are alike would be expected.

The study findings for Part I seem to substantiate such a premise in at least the consummatory-liking connotation in that such perceived social achievement concepts did emerge for Indian pupils in non-integrated classroom situations. The consummatory-liking connotations emphasize "togetherness"; therefore they would be supported by native teachers who esteem this value above others. Peer linkages to other native children in such classrooms also would reinforce this concept.<sup>47</sup> (See Page 43 of this Report.)

Sex designations for Teacher Morale, School (As an Institution) Morale, and School Dropout Morale were significant in Table X findings. These were checked further and School Dropout Morale and School Anxiety Morale for Indian boys found to be significant. Indian boys, particularly, may be in need of native teacher models. This would seem to endorse the concept of native men as teachers with whom the boys could identify. Unfortunately, the sample of Indian boys in Study Group I, who responded to the questions, was so small as to raise doubt as to the validity of the analysis.<sup>48</sup>

Ethnicity Designated Needs revealed from Alpha Probability Findings: Sex, Age, Ethnicity, Indian Pupils in Integrated and Non-Integrated Classrooms with Morale, PSA and TDLB, Table X also seem to support a "wish" for different kinds of teaching behaviors than those pupils are now meeting. It will be recalled that needs were expressed by Indian pupils for:

1. Help with school anxiety.
2. More flexibility of teaching behaviors in Authority-Task dimensions. Expressive behaviors are needed for a feeling of belonging.

3. More help in understanding the value of working in class and upon homework assignments with peers.
4. Better learning-others' identifications for native pupils in integrated school situations in order to realize social achievement.

Native teachers would help meet these needs, with something more added. Native teachers would offer an understanding of the values and resulting modes of behavior which differentiate the Indian from the non-Indian. They could do even more. They could, using Eisenstadt's premise, act as bridges between the native way of seeing things in life to the demands of the learning institutions.<sup>49</sup> To the extent that native teachers, themselves, endorse the values and mores of the larger society, they could instill these in their pupils perhaps more by what they are themselves and what they do than in what they might recommend.<sup>50</sup> It is in their ability to bridge between the cultures that they become models for behavior of others. A man can be informed of the way to walk by the actions of one who has been there. Better still would be his experiencing how to accomplish by doing it himself. Even so, such "experiencing" is probably best accomplished when the teacher is from a background, an ethnic origin, similar to that of the learner.

Supposition IV seems a valid concept to consider. Indian pupils may well be seeking native teachers as models for classroom identification in learning.

#### Conclusion to Part I

Part I of the Perceptions Research has dealt with Morale, Perceived Social Achievement, and Teaching Dimensions of Learning Behavior. Specific findings for each of these study probes are numerous. Certain general statements, however, may be made about each.

Morale. Indian pupils seem to endorse morale concepts of teachers held by the total sample populations. Their perceptions of teachers

are frustrated by concerns for teacher likings - dislikings of native children. Indian pupils' peer morale, in general, is high; although Indian pupils in integrated school situations seem to suffer a lower perceived peer morale focus. The School as an Institution is liked by native pupils tested, although they dislike doing homework, and need to learn the value of working in class and upon homework with their peers. School Dropout Morale and School Anxiety Morale, with high factor loadings of .832 and .812 (Indian Structural Analysis) provide indications of serious problems for Indian pupils. They have a sense of time boredom with the learning task, and anxiety about the way they get along with members of the class. Indian pupils in integrated classrooms, particularly, seem to reveal "dropout" frustrations.

Non-Indian pupils endorse their teachers with esteem and liking, and yet suffer some teacher - school as an institution negation ambivalences. They are highly oriented to their peers, even perhaps to the point of worrying about how they get along with members of their classes too much. Homework for these pupils also seems an arduous task. They admit to some school anxiety in that school work makes them "nervous", and "time for them also passes slowly in class." Their school anxiety is, however, for the most part a Protestant Ethic Morale anxiety, a "getting ahead - work success" orientation.

Perceived Social Achievement. Indian children indicate a consummatory - affectivity set of "key" perceptions. (See Indian Pupil PSA Structural Analysis.) In nearly every instance, the topic factor item focus is upon liking, family, friendships, and helping one another. Self concepts involve self-expressiveness in telling classmates about

schoolwork. Family and neighborhood friends assume importance as significant others in these pupils' social perceptions. Learning means liking to do what the rest of the class is doing. In learning relevances, the native pupils assessed are concerned about accomplishment in school and whether or not their family cares about their scholarly achievements. In general, there is more focus of the Indian pupils primarily upon self and then upon relations with others, who usually are neighborhood friends. Integrated Indian pupils seem to hold Protestant Ethic "work-success" orientations, while non-integrated Indians show endorsement of consummatory-liking concepts.

Non-Indian pupils' perceptions remind one of "present day social concerns about youth". In self perception, they are involved with self expressiveness or ventilation of feelings about school work with classmates and with questioning the part they play in group decision-making processes with peers. The majority of their focus is upon significant others: classroom peers, families, and then neighborhood friends. They, like the Indian pupils, are fearful about family disorientations which might result in boarding school or home placement. They are concerned also that family expectations for their success in school be "lived up to". The learning situation for non-Indian pupils seems to be subservient to their concern for classmate esteem and liking -- almost to the point where one may contend that these pupils are "other directed" rather than "self directed". The learning focus for these pupils may be said to be "others-to-self" directed as opposed to that of Indian pupils which are "self-to-others" directed.

Teaching Dimensions of Learning Behavior. Indian pupils are



perceptive of dimensions of teaching behavior which are expressive, task, and small group oriented. They like teaching behaviors which express use of their ideas as well as ideas of teachers and ideas in books. They are bifurcated about whether or not teachers like or dislike them, and are concerned about teachers giving them credit for how well they do in class. They want more help with school work and anything needed from teachers, and they want teachers who make sure they learn the facts but also care how they feel.

In task dimensions, they indicate concern about new work being assigned before they are able to get right answers to old work. Regarding the task dimension, they would like teachers to change assignments at least once in awhile when pupils do not like them. They also want to use a certain kind of work again after they have learned it. They want all exercises or test papers corrected, although they indicate that they usually are. They want teachers to explain why they have to do something which they do not want to do.

Small group perceptions of Indian pupils reveal their endorsements for this kind of classroom learning. They want to work in small groups. In integrated classroom situations, small group work may help insure their social achievement, particularly when an Indian peer can work with them in the small group relationship.

Non-Indian pupils endorse expressive, authority, task, and expressive - small group dimensions of teaching behavior. In expressive dimensions, they indicate interest in teachers who make the work interesting or "fun" for pupils, who like pupils and who are "fair" in deciding something about a pupil. They want teachers to help them

with work, care how they feel, and to give them credit for how well they do in class.

They are aware of arbitrary teacher behaviors regarding the class starting a new kind of work, directing them more than allowing them some "say" in planning and execution of classwork, and of lack of consideration for pupils once a teacher has "made up his mind". They want teachers who express the authority-task dimension of making sure they complete written assignments and who try to explain work another way when the class doesn't understand.

As to task dimensions, they believe teachers have them write or tell what they know several times a day or at least several times a week. They want teachers to review old work before starting new work, and they would like to be sure they have the answers right to old work before new work is commenced. They couple exercise and task evaluations of test papers with disliking of pupils by teachers.

They contend that "just about always" teachers are kind in asking questions and in allowing small group work, which they like.

In summary, it may be said that Indian and non-Indian pupils have tended to express their morale, perceived social achievement, and teaching dimension preferences. Indian pupils do seem to favor many of the specific behaviors favored by non-Indian pupils; however, a different perceptual set seems apparent for Indian pupils, a consummatory-affectivity focus upon living and learning in the classroom, whereas the non-Indian pupils favor a work-success "Protestant Ethic" focus. Perhaps the single most interesting concept to emerge from Part I is

a "wish" which native pupils may be holding for native teachers as scholarly adult models whom they may emulate, and with whom they can identify.

## REFERENCES

## References

- <sup>1</sup> Nordstrom, Friedenberg and Gold define "Ressentiment" as "hatefulness caused by losing out in competition with others over the course of his life,....a hatefulnness mashed by understanding and affection." Res-sentiment occurs in school "when the individual bends and adjusts to the pressures of an institution," (against his own natural instincts) and "to the degree the individual bends, the pressures, reified as the press, cooperate in the making of his character." See Carl Nordstrom, Edgar Z. Friedenberg and Hilary A. Gold, Society's Children: A Study of Ressentiment in the Secondary School. N.Y.: Random House, 1968, pp.12,13.
- <sup>2</sup> Murray L. Wax et. al. "Formal Education in an American Indian Community" Social Problems, Journal of the Society for the Study of Social Problems, Vol. 11, No. 4, Spring, 1964, pp.84,85.
- <sup>3</sup> Ibid.
- <sup>4</sup> Ibid., p. 43.
- <sup>5</sup> Ibid., p. 52.
- <sup>6</sup> Edward C. Johnson et. al., The American Indian Graduate: After High School, What? Portland, Ore.: Northwest Regional Educational Laboratory, November, 1968, p. 67.
- <sup>7</sup> H. B. Hawthorn et. al., A Survey of the Contemporary Indians of Canada, Vol. 2. Ottawa: Indian Affairs Branch, October, 1967, p. 123.
- <sup>8</sup> Ibid.
- <sup>9</sup> Murray L. Wax et. al. op. cit., pp.55,56.
- <sup>10</sup> Ibid., p. 72.
- <sup>11</sup> Ibid., p.55. Note: The Wax study is quoted as a reference and predictive source for the present research as it dealt with the Sioux. The pupils of the Morley Bands included in this present research also are Siouian-speaking. Language stocks do seem to provide some means of ascertaining likenesses of perceptions and mores. (See Wax study recommendations, pp.107,108.)
- <sup>12</sup> Cardinal presents concepts of needs for adult education and achievement as an integral part of Indian education. See Chapter 5, Harold Cardinal, The Unjust Society: The Tragedy of Canada's Indians. Edmonton, Alberta: M.G. Hurtig Ltd., 1969.



<sup>13</sup>Daniel Seligman, "A Special Kind of Rebellion" in Youth in Turmoil. Adapted from a Special Issue of Fortune. N.Y.: Time-Life Books, 1969, pp. 13-30.

<sup>14</sup>Max Ways, "The Faculty is the Heart of the Trouble," Ibid., pp. 141-159.

<sup>15</sup>Robert C. Albroom. "Parenthood Today is No Bore," Ibid., pp. 108-119.

<sup>16</sup>Carl Nordstrom et. al., op. cit.

<sup>17</sup>Kenneth Keniston, The Young Radicals: Notes on Committed Youth. N.Y.: Harcourt, Brace and World, 1968. Also see Kenneth Keniston, The Uncommitted: Alienated Youth in American Society. N.Y.: Harcourt, Brace and World, 1965.

<sup>18</sup>G.H. Wierzynski, "An American Student Manifesto" in Youth in Turmoil, op. cit. pp. 47-57.

<sup>19</sup>As an example, see Eric Berne, The Structure and Dynamics of Organizations and Groups. N.Y.: Grove Press, Inc., 1963.

<sup>20</sup>See Elihu Katz and Paul F. Lazarsfeld, Personal Influence. N.Y.: The Free Press, Paperback Edition, 1964.

<sup>21</sup>Erich Fromm, Man for Himself. N.Y.: Holt, Rinehart, Winston, 1947, p. 104.

<sup>22</sup>David Reissman, The Lonely Crowd: A Study of The Changing American Character. New Haven, Conn.: Yale University Press, 1950.

<sup>23</sup>James S. Coleman, "The Adolescent Subculture and Academic Achievement" in Martin and Friedman, Readings in Sociology of Education. N.Y.: Selected Academic Reading, Inc., DNT 1A - 9A.

<sup>24</sup>C. Wayne Gordon, Leta McKinney Adler and John D. McNeil, Dimensions of Teacher Leadership in Classroom Social Systems, Pupil Effects on Productivity, Morale and Compliance. A report of research supported by

the Cooperative Research Program of the Office of Education, U.S. Department of Health, Education, and Welfare Project No. 1084. Los Angeles: Department of Education, University of California, 1963.

The scale for the present research, while including most of the items of the Gordon-Adler-McNeil scale, is not presented in the same form, as factor analyses for the present research reveal differences between this sample population and the Gordon-Adler-McNeil population. The Gordon-Adler-McNeil scales did not consistently hold up with the sample population for the present research.

It is true that the scale was edited slightly by a panel of teachers of Indian children so that the vocabulary would meet the needs of the present study; however, the content was not appreciably changed.

25

Louise C. Lyon, Group Structure, Teacher Behavior and Morale in Elementary Classrooms. Doctoral Dissertation. Available, Ann Arbor, Mich.: University Microfilms, Inc., 1965. In the Group Structure study, Oxnard, California school pupils' perceived social achievement was measured four times during the school year. A small build-up of achievement was apparent over this period of time. Individual cases of perceived social achievement paralleled fluctuations of teacher behavior styles as ascertained from Bales Interaction Analyses over the school year. It was suggested that teachers sensing a chaotic condition of fluctuation in the children's social system tend to produce more teaching acts and vary their teaching styles in attempts to alter the condition.

Although the Lyon Perceived Social Achievement scale was not factor analyzed in the original study, it was so treated in an unpublished study of the El Paso Boys' Club, El Paso, Texas, which was made up entirely of Spanish-speaking boys. The present factor analyses reveal differences in perceptions between the present research populations and those of the El Paso Boys' Club. The factor analysis of the El Paso Boys' Club split into two major factors which could be referred to as "concerns for self" and "concerns re others."

The Lyon scale also was edited by the panel of teachers of Indian children so that the vocabulary would meet the needs of the present research.

26

C. Wayne Gordon, et. al. op. cit. Gordon, Adler and McNeil defined teaching behavior in modes of low, middle, and high task behavior, authority behavior and expressive behavior as a result of responses by students. In the interpretations, the task orientation referred to the degrees of requirements held by the teacher regarding performance of tasks; the expressive orientation scaled the regard of the teacher for individual initiative, personal life and

needs; and the authority orientation dealt with the degrees of permissiveness or demand for conformity to teacher designations regarding classroom life. Low task teachers tended to show less competency in the initiation of work and its completion than middle or high task teachers. Authority modes progressed on the three levels with the high authority teachers tending to delegate less work and giving less credit to children's decision-making ability. Expressive behavior tended to substantiate a progression of expressive support with the high expressive teacher granting the most support, yet revealing a certain "tension level" in the classroom. Relationships of this behavior with morale, achievement and productivity were made. It was found that those forms of leadership which achieve compliance over and above the demands of the system also tend to maximize compliance with demands of the system to learn, to work, and to conform to the norms of class order. Relationships with morale, achievement and productivity were made.

This scale like the Gordon-Adler-McNeil morale scale did not hold up for the factor analysis of the present research population; therefore the scale is presented as it is defined by the present research.

This scale also was edited by the panel of teachers of Indian children so that the vocabulary would meet present research needs.

27

To test tendencies for the morale, perceived social achievement, and teaching behavior scales to operate as separate, unique measurements, special cross-questionnaire scales were attempted to try to obtain a peer-teacher orientation scale and an alienation scale. These attempts did not prove successful, but only served to endorse the fact that the three testing instruments do indeed measure separate concepts.

28

The factor analysis programs used are those to be found in the system/360 scientific subroutine package (360A-CM-03X) Version 3. This is a Jacobi Principle Component solution with a Varimax rotation.

29

Note: The three response choices as answers to the Morale scale proceeded in order from the positive to the negative, i.e. "Yes," "Sometimes," "No." Because the majority of "The Teacher" factor set items are positive, those few which are negative can be considered "positive." A median for a scale which proceeds from positive to negative choices may be said to be indicative of endorsement when it is lower in range, i.e. the lower the median, the higher its endorsement of the factor item, ("Yes" was rated mathematically as "one", "Sometimes" was rated as "two," and "No" was rated as "three.") Medians on the Total Sample Morale Structural Analysis ranged from 1.192 to 2.924. (See Appendix IV-1.)

A further point needs emphasis at this place in the report. A specific request of Indian Affairs personnel made to the researchers was for a search of the data to ascertain any differences which might exist between Indian pupils in integrated and non-integrated classroom situations. Due to this request, although the number of Indian pupils in integrated and non-integrated classrooms fell below 100 for certain analyses of Part I of the study, the factor analyses were conducted and data reported upon as though the N were higher in an effort to discover inferential differentiations.

<sup>30</sup> Alvin W. Gouldner, "Cosmopolitans and Locals: Toward an Analysis of Latent Social Roles - II," Administrative Science Quarterly, p. 449.

<sup>31</sup> Section 115 of the Indian Act determines that between the ages of 7 and 17 Indians are required to attend school, and the Minister may oblige any Indian to attend school until the age of 18. The Minister also designates the school which an Indian child attends on the condition that his religious beliefs are honored, e.g. he will be sent to a school of the proper denomination (Section 117 of Indian Act.) With regard to the latter, Indian children are being placed in provincial public schools as well as in schools on reserves.

<sup>32</sup> For further understanding of self-other orientations, see Charles H. Cooley, "The Social Self" in T. Parsons, et. al. (Ed.) Theories of Society, Vol. II, N.Y.: The Free Press, 1961, pp. 822-828. Also see Erving Goffman, The Presentation of Self in Everyday Life, N.Y.: Doubleday Anchor Books, Doubleday and Company, Inc., 1959.

<sup>33</sup> David Reissman, op. cit.

<sup>34</sup> Talcott Parsons implies "consummatory" as being "an integrative goal-gratificatory task performance process," and "instrumental" as being "a latent pattern maintenance-adaptation task performance process." See his Family, Socialization and Interaction Process. Glencoe, Ill.: The Free Press, 1955, p. 39.

<sup>35</sup> The Indian sample endorsement of classmates may have been influenced by the sample size of Indian pupils in non-integrated classrooms, 102, versus only 41 in integrated classrooms. Indian pupils in non-integrated classrooms on reserves usually are relating with classmates who are neighborhood friends.

Refer also to the second paragraph of Footnote 29.



<sup>36</sup>Feldmann advocates more parental participation in education programs. See Shirley Feldmann, "A Pre-School Enrichment Program For Disadvantaged Children", The New Era, 45:3, 1964.

Bettelheim and Janowitz discuss possibilities of parental education to eliminate ethnic prejudice. See Bruno Bettelheim and Morris Janowitz, Social Change and Prejudice, N.Y.: The Free Press of Glencoe, The Macmillan Company, 1950.

<sup>37</sup>Individualized teaching approaches, so endorsed today, may be providing an interesting side-effect: that of preserving self identity orientations, however in a work-success endorsement direction.

<sup>38</sup>Erving Goffman, op. cit.

<sup>39</sup>Eric Berne, The Structure and Dynamics of Organizations and Groups, N.Y.: Grove Press, Inc., 1963.

<sup>40</sup>Josephine Klein, The Study of Groups. London: Routledge and Kegan Paul, Ltd., A Routledge Paperback, 1967.

<sup>41</sup>Robert F. Mager, Developing Attitudes Toward Learning. Palo Alto, California: Fearon Publishers, 1968.

<sup>42</sup>The Perceived Social Achievement scale also had three response choices from which pupils could choose one. These proceeded, as did the Morale scale, from "positive to negative", i.e. "A great deal", "Some", and "Not very much". Again, it may be held that a median for such a scale, which progresses from positive to negative in directionality may be said to be indicative of endorsement when it is lower in range, i.e. the lower the median, the higher its endorsement of the factor item. Medians on the Total Sample Perceived Social Achievement Analysis ranged from 1.073 to 2.357. (See Appendix V-i. Refer also to text, top of Page 32.)

<sup>43</sup>The difference here may lie in the concept that the Total population sample includes both Indian and non-Indian pupils, who may have classmates who live nearby, while the non-Indian sample may include classmates who do not necessarily live close by.

<sup>44</sup>Because the Teaching Dimensions of Learning Behavior questions varied in their progress from "positive to negative" for some questions, and from "negative to positive" directionality for other answers, the median comparisons would not have been valid. Further analyses dealing



with factor sets or individual items of the Teacher Dimension of Learning Behavior scale also takes these changes in directionality of answers into consideration.

<sup>45</sup>Warm, expressive teacher behaviors would be supportive also of Indian pupil consummatory-liking orientations. (See Page 43 of this Report.)

<sup>46</sup>The multiple linear regression analyses program was taken from IBM System/360 Scientific Subroutine Package (360-CM-03X) Version III, page 404 ff; -- modified to use variable means for missing variables by J. Wrenshall, 1969. For reference, see S. Ostle, Statistics in Research, The Iowa State College Press, 1953, Ch. 3.

<sup>47</sup>Table X findings support strong Learning-Others PSA as the only significant "Indian pupils in Integrated - Non-Integrated Classroom" finding. This analysis, Number 3.1 of "Chi-Square Analyses with Perceived Social Achievement Indications," page 81, revealed a higher endorsement by Indian pupils in non-integrated classrooms. The factor set dealt with at least one factor more conducive to the Protestant Ethic which Indian pupils in non-integrated classrooms may tend to endorse more highly than Indian pupils in integrated classrooms: i.e. "learning English".

<sup>48</sup>The further probe for sex and ethnicity with Study Groups I and II implications also reveals Alpha Probability Indications:

Alpha Probability Indications -- Chi-Square Controls  
for Sex, Ethnicity: Study Groups I and II with Morale Indices

	Teacher Morale	Peer Morale	School Morale	School Dropout Morale	School Anxiety Morale
Male Indians	-.39*	-.35	-.37	.26	-.80
Study Groups I, II	2.63 .26	1.76 .41	1.90 .38	7.31 .02	9.63 .008
Female Indians	.02	.18	.07	.13	-.14
Study Groups I,II	2.78 .83	1.54 .46	2.51 .28	3.48 .17	.63 .72
Male Non-Indians	-.44	-.18	-.34	.18	-.14
Study Groups I,II	19.63 .0001	3.65 .16	11.42 .003	3.56 .16	3.20 .20
Female Non-Indians	-.51	.01	-.38	.10	-.09
Study Groups I,II	22.89 .0000	.62 .73	12.45 .002	1.40 .49	1.82 .40

\*Upper number in each cell refers to Gamma, middle number to Chi-square equivalence, and lower number to level of significance.

<sup>49</sup>S.N. Eisenstadt, From Generation to Generation. N.Y.: The Free Press of Glencoe, Collier-Macmillan Ltd., 1956. See particularly Page 43.

<sup>50</sup>A class of some twenty-five native teacher aides was held in the summer of 1969. The course was initiated by the Department of Indian Affairs and Northern Development and offered by Mount Royal Junior College and the University of Calgary under the specific encouragement, planning, and direction of E.R. Daniels, Regional Director of Indian Education, Alberta. The Native Aides have proved their worth in implementing learning and across-culture bridging during the school year 1969-70, not only for the native pupils but in their contacts with parents as well. Native school counsellors also are helping with liaison with parents.

Native teacher aides programs should be further developed and every effort made to encourage those who are successful to proceed further professionally.

APPENDIXES  
FOR  
INTRODUCTION AND PART I

Appendix I  
Children Who Entered Classrooms After Start of School 1968-69

Teacher No.	No. of Indian Children	No. of Non-Indian Children
1	6	0
4	9 (6 were transferred from another homeroom when two sections were amalgamated.)	0
7	0	3
8	1 (Returned to school.)	1
9	1 (Metis)	5 (Transferred from another class -same school.)
11	5 (1 Pupil re-entered class.)	0
12	0	1
14	0	1
15	2 (1 Pupil re-entered class.)	2
16	1 (Transfer from a reserve school.)	0
17	0	0
19	0	2
21	0	0
40	0	2
41	6	4
42	0	0
45	0	0
46	0	0
47	0	0
48	0	1

Appendix I - ii

Children Who Entered Classrooms After Start of School 1968-69

Teacher No.	No. of Indian Children	No. of Non-Indian Children
49	0	0
51	1	0
52	0	0
53	1	2
Total	<u>33</u> (7 - Transfers 3 - Re-entries)	<u>24</u> (5-Transfers)



# Appendix II

## Children Who Left Classrooms During School Year 1968-69

Teacher No.	No.	Indian Children Reasons for Leaving	No.	Non-Indian Children Reasons for Leaving
1	2	"Returned to his home on Peigan Reserve when residence school closed." "Moved to Calgary."	0	
4	1	"In this school from provincial school awaiting settlement of family difficulties."	0	
7	1	"Unknown."	1	"Family moved."
8	1	"A quarrel with reserve children."	1	"Parents moved to another town."
9	0		5	"Family problems" - 1 "Transfers to 7B from 7A - 4"
11	9	"Transfers to another school due to closing of residence school." - 3 "Left to go to another town." - 2 "Dropped out at age 16." - 2 "Dropped out to work." - 1 "Home trouble." - 1	0	
12	2	"Unknown." Suspended due to lack of attendance."	0	
14	1	"Wanted to be with her mother and family she was living with wasn't treating her well."	3	"Moved." - 2 "Suspended, then transferred to another school." - 1
15	2	"Transfer to another school." "To work on reserve."	2	"Transfer to another school." "Working as a laborer."
16	1	"Almost 17, felt 'out of place' with younger pupils."	0	

Appendix II - ii

Children Who Left Classrooms During School Year 1968-69

Teacher No.	No.	Indian Children Reasons for Leaving	No.	Non-Indian Children Reasons for Leaving
17	0		0	
19	0		0	
21	1	"Wanted to go to school on the reserve."	0	
40	4	"Absent most of time - didn't like school." "Ran away from home." "Stopped coming to school." - 2	1	"Transfer to another school."
41	4	"Attended only 10 days." "Attended only 6 days." "Attended only 17 days." "Tall girl - felt grown-up; not interested in school."	2	"Family moved to city." "Transfer to another school."
42	3	"Spent 6 days here; didn't adjust - returned to reserve school." "Poor adjustment." "Became discouraged."	2	"Father's change of employment." - 2
45	1	"Is staying home now."	3	"Went to work" - 2 "Moved." - 1
46	0		0	
47	1	"Wasn't working. Father told her to quit."	0	

Appendix II - iii

Children Who Left Classrooms During School Year 1968-69

Teacher No.	No.	Indian Children Reasons for Leaving	No.	Non-Indian Children Reasons for Leaving
48	1	"Transferred to reserve school."	1	"Moved to Edmonton."
49	0		0	
51	1	"Left school."	1	
52	0		0	
53	0		1	"Transfer to another school."
Total <u>24</u>	<u>36</u>	(9 transfers due to family moves, closing of residential school, desires to attend reserve schools. 16 appear to have "dropped out" of school.)	<u>23</u>	(13 transfers due to family moves. 3 appear to have "dropped out" of school.)

Appendix III - i  
Free Response Inventory for Teachers

What are Indian and non-Indian children really like? What words come to your mind when you think of the children you have known or expect to work with? You are asked to describe the characteristics or behavior of such children in the following manner:

- Step 1 Fill out the headings on this page. (i.e. your Identification Number, the date, your age, sex, Grade in which you instruct, School)
- Step 2 On the following page, please list all the words that you think are most descriptive of Indian and non-Indian children. You may list as many or as few as you like. If it helps, think of all the different words you would use to finish the sentence: "Indian children are \_\_\_\_\_,"  
and "Non-Indian children are \_\_\_\_\_."
- Step 3 When you have finished listing words, go back over the list and circle the words that you think are desirable or favorable characteristics or behaviors.\*

Note: Because many of the teachers who responded neglected to circle the words they thought to be "desirable or favorable characteristics or behaviors," and some of the teachers did not complete twenty-five choices, the rank-ordered analysis was constructed from the number of teachers who endorsed the first five choices.

## Appendix III - i (Cont'd.)

## Free Response Inventory for Teachers

Page 2.

## Free Response Inventory

Indian children are:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_
16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. \_\_\_\_\_

Non-Indian children are:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_
16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. \_\_\_\_\_



## Appendix III - 1 (Cont'd.)

## Free Response Inventory for Teachers

Page 3.

## Free Response Inventory

Indian children are:

20. \_\_\_\_\_

21. \_\_\_\_\_

22. \_\_\_\_\_

23. \_\_\_\_\_

24. \_\_\_\_\_

25. \_\_\_\_\_

Non-Indian children are:

20. \_\_\_\_\_

21. \_\_\_\_\_

22. \_\_\_\_\_



23. \_\_\_\_\_

24. \_\_\_\_\_

25. \_\_\_\_\_


## Appendix III - ii

Findings: Free Response Inventory for Teachers  
re Indian Pupil Descriptive Designations

R.O.	Descriptive Designations	No. of Teachers Endorsing Designations
1	Reserved, shy, withdrawn	16
2	Soft-spoken, quiet, uncommunicative	13
3	Affable	9
5	Suspicious and resentful	4
5	Unresponsive, non-participative	4
5	Careless, inferior in academic achievement	4
10	Non-aggressive	3
10	Need kindness, no harsh punishment	3
10	Active and athletic	3
10	Obedient	3
10	Neat	3
10	Artistic or creative	3
10	Individualistic	3
17	Group-minded	2
17	Happy	2
17	Innocent	2
17	Ashamed and introverted	2
17	Proud	2
17	Suppressed resulting in little initiative	2
17	Handicapped by language and home environment	2
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div>		
29.5	Generous, Intelligent, Capable, Honest Dishonest, Curious, Religiously-oriented, Sly, Cooperative, Free, Independent, Forgiving, Slow, Concrete, Irresponsible, Respectful	1 teacher endorsed each designa- tion

## Appendix III - iii

Findings: Free Response Inventory for Teachers  
re Non-Indian Pupil Descriptive Designations

R.O.	Descriptive Designations	No. of Teachers Endorsing Designations
1	Extroverted, loud or bold	11
2	Communicative, and responsive	8
3.5	Talkative and likable (easy to talk to)	6
3.5	Aggressive or argumentative	6
5.5	Active	5
5.5	Friendly	5
7.5	Eager and enthusiastic	4
7.5	Unpredictable and univariable	4
9	Individualistic	3
16	Responsible	2
16	Impulsive	2
16	Intelligent	2
16	Capable and industrious	2
16	Healthy and happy	2
16	Proud	2
16	Self-confident	2
16	Reactionary and disrespectful	2
16	Outspoken	2
16	Relaxed	2
16	Creative and imaginative	2
16	Well-groomed	2
16	Better informed	2
		
32	Independent, Dependent, Helpful, Demanding, Future-oriented, Predictable, Quiet, Dominant, Lazy, Competitive, Restricted, Grudge-bearing, Harsh discipline usually necessary, Defensive, Fearful, Handicapped by language, Not handi- capped by home environment, Respectful, Obedient	1 teacher endorsed each designa- tion

Appendix IV - i  
Total Sample Structural Analysis  
Pupil Morale  
(Both Indian and Non-Indian Pupils)

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
21	<u>THE TEACHER: I think this is an</u> <u>extremely good teacher.</u>	.813	1.532
19	I like my teacher.	.774	1.355
25	I wish my class could have this teacher next year.	.747	1.739
22	I dislike my teacher.	-.697	2.711
20	It would be all right with me if this class had a different teacher.	-.690	2.514
24	I would like to keep in touch with this teacher after I leave this class.	.609	2.202
23	If I were teacher of this class, I would do things pretty much the way my teacher does them.	.605	1.570
26	I would rather please this teacher than please the other pupils in this class.	.524	2.003
14	<u>PEERS: I have many friends in this</u> <u>class.</u>	.759	1.198
15	I like being with members of this class.	.731	1.192
18	Members of this class are friendly to me.	.716	1.321
17	I like working with my classmates.	.663	1.205
10	<u>SCHOOL (As an Institution): After a</u> <u>holiday, I want to get back to school</u> <u>in order to learn something.</u>	.693	1.900
02	I feel good about coming to school every day.	.655	1.949
07	After a vacation, I am happy to get back to school.	.620	1.763
01	I like school better than most pupils my age.	.555	2.022
05	I like school better this year than I did last year.	.494	1.454
06	<u>SCHOOL DROPOUT: I would like to drop</u> <u>school now.</u>	.671	2.924
03	I like to miss school.	.563	2.502
12	Time in this class passes very slowly for me. I'm what you call a clock watcher.	.524	2.343

## Appendix IV - i (Cont'd.)

Total Sample Structural Analysis  
Pupil Morale  
(Both Indian and Non-Indian Pupils)

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
11	<u>SCHOOL ANXIETY: I am getting ahead in</u> <u>my school work for this class.</u>	.588	2.297
09	My school work makes me feel nervous.	-.566	2.379
16	I feel unhappy about the way I get along with the members of my class.	-.490	2.572

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\* Factor sets are arranged in arbitrary sequence  
to meet logical interpretations.

N = 646  
Variance accounted  
for = 49.2%



Appendix IV - ii  
Total Indian Pupil Sample Structural Analysis  
Pupil Morale

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
19	<u>THE TEACHER: I like my teacher.</u>	.835	1.303
22	I dislike my teacher.	-.800	2.660
21	I think this is an extremely good teacher.	.796	1.476
20	It would be all right with me if this class had a different teacher.	-.701	2.303
25	I wish my class could have this teacher next year	.524	1.390
24	<u>TEACHER APPROACHES: I would like to keep in touch with this teacher after I leave this class.</u>	-.783	2.071
23	If I were teacher of this class, I would do things pretty much the way my teacher does them.	-.566	1.512
26	I would rather please this teacher than please the other pupils in this class.	-.558	1.733
14	<u>PEERS: I have many friends in this class.</u>	.774	1.705
04	I have a better time at school than I do at home.	.723	1.920
01	<u>SCHOOL (As an Institution) AMBIVALENCES: I like school better than most pupils my age.</u>	.741	1.858
07	After a vacation I am happy to get back to school.	.690	1.615
02	I feel good about coming to school every day.	.677	1.620
13	I don't like doing homework, instead, I would rather go to a show or play with my friends.	-.606	2.027
15	<u>SCHOOL INVOLVEMENT: I like being with members of this class.</u>	.675	1.296
05	I like school better this year than I did last year.	.658	1.438
08	I like to do my school work for this class.	.547	1.705
11	<u>SCHOOL WORK: I am getting ahead in my school work for this class.</u>	.875	2.457

Appendix IV - ii (Cont'd.)  
Total Indian Pupil Sample Structural Analysis  
Pupil Morale

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
12	<u>SCHOOL DISENCHANTMENT: Time in this class passes very slowly for me. I'm what you call a clock watcher.</u>	.832	2.137
16	<u>SCHOOL SOCIAL RELATIONS ANXIETY: I feel unhappy about the way I get along with the members of my class.</u>	.812	2.233

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\*Factor sets are arranged in arbitrary  
sequence to meet logical interpretations.

N = 123  
Variance accounted  
for = 63.5%

Appendix IV - iii  
 Indian Pupils in Integrated Classrooms Structural Analysis  
 Pupil Morale

<u>Item No.*</u>		<u>Rotated Factor Scores</u>		<u>Median</u>
24	<u>THE TEACHER: I would like to keep in touch with this teacher after I leave this class.</u>	-.793		2.188
26	I would rather please this teacher than please the other pupils in this class.	-.732		1.688
21	<u>THE TEACHER - SCHOOL - PEER AMBIVALENCES: I think this is an extremely good teacher.</u>	.858		1.460
25	I wish my class could have this teacher next year.	.675		1.500
05	I like school better this year than I did last year.	.669		1.389
11	I am getting ahead in my school work for this class.	.668		2.700
13	I don't like doing homework, instead, I would rather go to a show or play with my friends.	.485		2.000
22	I dislike my teacher.	.450		2.672
15	<u>PEERS - SCHOOL - TEACHER AMBIVALENCES: I like being with members of this class.</u>	.882		1.310
17	I like working with my classmates.	.604		1.357
06	I would like to drop school now.	-.600		2.868
19	I like my teacher.	.585		1.339
01	I like school better than most pupils my age.	.576		2.033
03	I like to miss school.	-.524		2.405
18	<u>PEERS - SCHOOL AMBIVALENCES: Members of this class are friendly to me.</u>	.793		1.389
10	After a holiday, I want to get back to school in order to learn something.	-.780		1.630
04	I have a better time at school than I do at home.	.730		2.079
14	I have many friends in this class.	-.698		1.423
07	<u>SCHOOL (As an Institution) - DROPOUT AMBIVALENCES: After a vacation, I am happy to get back to school.</u>	.857		1.700
06	I would like to drop school now.	-.617		2.868
20	It would be all right with me if this class had a different teacher.	-.510		2.269
01	I like school better than most pupils my age	.463		2.033

Appendix IV - iii (Cont'd.)  
 Indian Pupils in Integrated Classrooms Structural Analysis  
 Pupil Morale

<u>Item No. *</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
09	<u>SCHOOL WORK AMBIVALENCES: My</u> <u>school work makes me feel nervous.</u>	.831	1.974
08	I like to do my school work for this class.	-.628	1.600
12	<u>SCHOOL DISENCHANTMENT - PRO -</u> <u>TEACHER AMBIVALENCES: Time in this</u> <u>class passes very slowly for me.</u> <u>I'm what you call a clock watcher.</u>	.824	2.200
23	If I were teacher of this class, I would do things pretty much the way my teacher does them.	.619	1.750

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\*Factor sets are arranged in arbitrary sequence  
to meet logical interpretations.

N = 40  
 Variance accounted  
 for - 74.6%

Appendix IV - iv  
 Indian Pupils in Non-Integrated Classrooms Structural Analysis  
 Pupil Morale

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
26	<u>PRO-TEACHER - SCHOOL AMBIVALENCES:</u> <u>I would rather please this teacher</u> <u>than please the other pupils in</u> <u>this class.</u>	.755	1.759
24	I would like to keep in touch with this teacher after I leave this class.	.697	2.000
25	I wish my class could have this teacher next year.	.589	1.330
07	After a vacation, I am happy to get back to school.	.571	1.563
13	I don't like doing homework, instead, I would rather go to a show or play with my friends.	-.513	2.039
20	<u>TEACHER - SCHOOL AMBIVALENCES: It</u> <u>would be all right with me if this</u> <u>class had a different teacher.</u>	.795	2.325
22	I dislike my teacher.	.763	2.651
19	I like my teacher.	-.734	1.281
06	I would like to drop school now.	.665	2.885
18	Members of this class are friendly to me.	.640	1.235
01	I like school better than most pupils my age.	-.597	1.739
16	<u>PEERS: I feel unhappy about the way</u> <u>I get along with the members of my</u> <u>class.</u>	-.772	2.197
15	<u>PRO-SCHOOL (As an Institution): I</u> <u>like being with members of this class.</u>	.777	1.287
14	I have many friends in this class.	.541	1.182
10	After a holiday, I want to get back to school in order to learn something.	.510	1.360
05	<u>PRO-SCHOOL (As an Institution) -</u> <u>TEACHER: I like school better this</u> <u>year than I did last year.</u>	-.714	1.474
21	I think this is an extremely good teacher.	-.697	1.487
08	I like to do my school work for this class.	-.607	1.756



Appendix IV - iv (Cont'd.)  
 Indian Pupils in Non-Integrated Classrooms Structural Analysis  
 Pupil Morale

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
09	<u>SCHOOL WORK ANXIETY: My school work makes me feel nervous.</u>	.792	2.266
13	I don't like doing homework, instead, I would rather go to a show or play with my friends.	.561	2.039
12	<u>SCHOOL DISENCHANTMENT: Time in this class passes very slowly for me. I'm what you call a clock watcher.</u>	-.698	2.097
17	I like working with my classmates.	-.689	1.235

\*Factor sets are arranged in arbitrary  
 sequence to meet logical interpretations.

N = 118  
 Variance accounted  
 for = 65.5%

Appendix IV - v  
Non-Indian Structural Analysis  
Pupil Morale

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
25	<u>THE TEACHER: I wish my class could have this teacher next year.</u>	.720	1.864
24	I would like to keep in touch with this teacher after I leave this class.	.714	2.255
21	I think this is an extremely good teacher.	.660	1.593
26	I would rather please this teacher than please other pupils in this class.	.615	2.116
23	If I were teacher of this class, I would do things pretty much the way my teacher does them.	.547	1.593
22	<u>TEACHER-SCHOOL AMBIVALENCES: I dislike my teacher.</u>	-.819	2.647
06	I would like to drop school now.	-.810	2.906
20	It would be all right with me if this class had a different teacher.	-.672	2.367
03	I like to miss school.	-.652	2.388
04	I have a better time at school than I do at home.	-.622	2.284
01	I like school better than most pupils my age.	.619	2.092
19	I like my teacher.	.608	1.421
02	I feel good about coming to school every day.	-.496	2.067
17	<u>PEERS: I like working with my classmates.</u>	.735	1.233
14	I have many friends in this class.	.663	1.203
16	I feel unhappy about the way I get along with the members of my class.	-.548	2.631
10	<u>PRO-SCHOOL (As an Institution) INCLINATION: After a holiday, I want to get back to school in order to learn something.</u>	.849	2.000
07	<u>SCHOOL INVOLVEMENT AMBIVALENCES: After a vacation, I am happy to get back to school.</u>	.787	2.039
05	I like school better this year than I did last year.	.603	1.601
13	I don't like doing homework, instead, I would rather go to a show or play with my friends.	-.480	2.039

Appendix IV - v (Cont'd.)  
 Non-Indian Structural Analysis  
 Pupil Morale

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
09	<u>SCHOOL WORK ANXIETY: My school work makes me feel nervous.</u>	.797	2.414
11	I am getting ahead in my school work for this class.	-.562	2.333
12	<u>SCHOOL DISENCHANTMENT: Time in this class passes very slowly for me. I'm what you call a clock watcher.</u>	-.745	2.248

\*Factor sets are arranged in arbitrary sequence  
 to meet logical interpretations.

N = 279  
 Variance accounted  
 for = 60.1%

Appendix V - i  
Total Sample Structural Analysis  
Perceived Social Achievement

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
05	<u>SELF EXPRESSIVENESS: Do you like to tell your friends who live near you about your schoolwork?</u>	.688	2.357
03	<u>SELF PERCEPTION - TIME-TASK DIMENSION: How often are you early or on time to school or class?</u>	.694	1.141
13	<u>SIGNIFICANT OTHERS: FAMILY - Do you feel happy when your family succeeds?</u>	-.718	1.073
17	Do you think your family likes you?	-.706	1.091
15	Do you like doing things and going places with your family?	-.688	1.210
23	<u>SIGNIFICANT OTHERS: NEIGHBORHOOD FRIENDS - Do you think your friends who live near you like you?</u>	-.728	1.589
19	Do you work to get jobs well done with your friends who live near you?	-.660	1.789
21	How often do you have a good time or work together with friends who live near you?	-.637	1.648
24	How often do your neighborhood friends really like you because you do something well?	-.634	1.918
20	Do you like doing what your friends who live near you do?	-.537	1.810
11	<u>LEARNING - OTHERS' ORIENTATION: Do your classmates sometimes feel the same way you feel about going to school?</u>	.640	1.583
10	How much do the members of your class want to learn good English?	-.606	2.068
22	Do your friends and you like learning in school?	-.533	1.830
07	<u>LEARNING - SELF-OTHERS ORIENTATION: Do your classmates think you are "smart"?</u>	-.611	2.181
04	How often do you help your classmates decide what to do in school?	-.584	2.189
08	Do you think your classmates like you?	-.494	1.896

Appendix V - i (Cont'd.)  
 Total Sample Structural Analysis  
 Perceived Social Achievement

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	
09	<u>PARTICULAR LEARNING RELEVANCES: Do your</u> <u>classmates help you with your homework?</u>	-.772	<u>Median</u> 2.260
12	How much do others in your class help you as you study and learn?	-.758	2.202

\*Factor sets are arranged in arbitrary  
 sequence to meet logical interpretations.

N = 648  
 Variance accounted  
 for = 50.5%

Appendix V - ii  
Indian Pupil Sample Structural Analysis  
Perceived Social Achievement

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
02	<u>SELF EXPRESSIVENESS - LEARNING</u> <u>ORIENTATION: Do you like to tell</u> <u>your classmates how you feel about</u> <u>schoolwork?</u>	-.639	2.423
22	Do your friends and you like learn- ing at school?	-.534	1.483
15	<u>SIGNIFICANT OTHERS: FAMILY - Do you</u> <u>like doing things and going places</u> <u>with your family?</u>	.759	1.241
13	Do you feel happy when your family succeeds?	.688	1.130
17	Do you think your family likes you?	.609	1.111
24	<u>SIGNIFICANT OTHERS: NEIGHBORHOOD</u> <u>FRIENDS - LIKING ORIENTATION - How</u> <u>often do your neighborhood friends</u> <u>really like you because you do some-</u> <u>thing well?</u>	-.739	1.804
23	Do you think your friends who live near you like you?	-.717	1.554
21	<u>SIGNIFICANT OTHERS: NEIGHBORHOOD</u> <u>FRIENDS - WORK-ACTIVITY ORIENTATION -</u> <u>How often do you have a good time or</u> <u>work together with friends who live</u> <u>near you?</u>	-.734	1.650
20	Do you like doing what your friends who live near you do?	-.731	1.952
19	Do you work well to get jobs done with your friends who live near you?	-.571	1.820
06	<u>LEARNING - SELF ORIENTATION: Do you</u> <u>like to do what the rest of your</u> <u>class is doing?</u>	.754	1.862
10	<u>LEARNING - OTHERS' ORIENTATION: How</u> <u>much do the members of your class</u> <u>want to learn good English?</u>	.767	1.778
08	Do you think your classmates like you?	.662	2.024



Appendix V - ii (Cont'd.)  
Indian Pupil Sample Structural Analysis  
Perceived Social Achievement

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
04	<u>LEARNING - SELF-OTHERS ORIENTATION:</u> <u>How often do you help your classmates</u> <u>decide what to do in school?</u>	.775	1.424
07	Do your classmates think you are "smart"?	.520	2.532
09	<u>PARTICULAR LEARNING RELEVANCES: Do</u> <u>your classmates help you with your</u> <u>homework?</u>	.775	2.508
12	How much do others in your class help you as you study and learn?	.738	2.342
14	How happy could you be in a boarding school or boarding home?	.515	2.524
01	<u>LEARNING - FAMILY RELEVANCES: How much</u> <u>do you want to get done in your school</u> <u>work?</u>	-.686	1.235
16	Do you think your family cares if you fail at school?	-.601	1.296

\*Factor sets are arranged in arbitrary sequence  
to meet logical interpretations.

N = 122  
Variance accounted  
for = 62.4%

Appendix V - iii  
Integrated Indian Pupil Sample  
Structural Analysis  
Perceived Social Achievement

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
04	<u>SELF PERCEPTION - HELPING: How often do you help your classmates decide what to do in school?</u>	-.883	2.542
21	How often do you have a good time or work together with friends who live near you?	-.456	1.667
13	<u>SIGNIFICANT OTHERS: FAMILY - Do you feel happy when your family succeeds?</u>	.811	1.103
17	<u>SIGNIFICANT OTHERS: FAMILY - LEARNING - Do you think your family likes you?</u>	.849	1.118
01	How much do you want to get done in your schoolwork?	.809	1.234
14	How happy could you be in a boarding school or boarding home?	-.788	2.560
12	How much do others in your class help you as you study and learn?	-.715	2.232
24	How often do your neighborhood friends really like you because you do something well?	-.684	1.827
22	Do your friends and you like learning at school?	-.656	1.789
15	Do you like doing things and going places with your family?	.652	1.234
02	Do you tell your classmates how you feel about schoolwork?	-.592	2.333
11	Do your classmates sometimes feel the same way you feel about going to school?	.557	1.739
10	How much do the members of your class want to learn good English?	-.552	1.870
19	<u>SIGNIFICANT OTHERS: NEIGHBORHOOD FRIENDS- WORK-ACTIVITY - Do you work to get jobs well done with your friends who live near you?</u>	.864	1.750
20	Do you like doing what your friends who live near you do?	.777	1.906
21	How often do you have a good time or work together with friends who live near you?	.705	1.667

Appendix V - iii (Cont'd.)  
Integrated Indian Pupil Sample  
Structural Analysis  
Perceived Social Achievement

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
06	<u>LEARNING - SELF ORIENTATION: Do you like to do what the rest of your class is doing?</u>	.705	1.917
11	Do your classmates sometimes feel the same way you feel about going to school?	-.614	1.739
03	<u>LEARNING - SELF-OTHERS' ORIENTATION: How often are you early or on time to school or class?</u>	.777	1.310
07	Do your classmates think you are "smart"?	.580	2.679
18	Does your family like to do what you like to do?	.564	2.174
08	<u>LEARNING - OTHERS-SELF ORIENTATION: Do you think your classmates like you?</u>	.826	2.029
23	Do you think your friends who live near you like you?	.575	1.479
16	<u>LEARNING - FAMILY RELEVANCES: Do you think your family cares if you fail at school?</u>	-.822	1.171
22	Do your friends and you like learning at school?	.487	1.789

\*Factor sets are arranged in arbitrary sequence to meet logical interpretations.

N = 41  
Variance accounted  
for = 74.8%

Appendix V - iv  
Non-Integrated Indian Pupil Sample  
Structural Analysis  
Perceived Social Achievement

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
23	<u>OTHERS TO SELF PERCEPTION: Do you think your friends who live near you like you?</u>	-.812	1.603
17	<u>SIGNIFICANT OTHERS: FAMILY - LEARNING - Do you think your family likes you?</u>	.862	1.107
01	How much do you want to get done in your schoolwork?	.822	1.235
14	How happy could you be in a boarding school or boarding home?	-.723	2.500
15	Do you like doing things and going places with your family?	.685	1.245
24	How often do your neighborhood friends really like you because you do something well?	-.564	1.792
18	Does your family like to do what you like to do?	-.515	2.140
13	Do you feel happy when your family succeeds?	.505	1.149
21	<u>SIGNIFICANT OTHERS: NEIGHBORHOOD FRIENDS - WORK-ACTIVITY ORIENTATION - How often do you have a good time or work together with friends who live near you?</u>	.772	1.638
20	Do you like doing what your friends who live near you do?	.748	1.972
19	Do you work to get jobs well done with your friends who live near you?	.648	1.859
06	<u>LEARNING - SELF ORIENTATION: Do you like to do what the rest of your class is doing?</u>	.722	1.828
11	Do your classmates sometimes feel the same way you feel about going to school?	.593	1.866
10	<u>LEARNING - OTHERS ORIENTATION: How much do the members of your class want to learn good English?</u>	-.750	1.710
12	How much do others in your class help you as you study and learn?	-.702	2.438
09	Do your classmates help you with your homework?	-.699	2.619
13	Do you feel happy when your family succeeds?	-.664	1.149

Appendix V - iv (Cont'd.)  
 Non-Integrated Indian Pupil Sample  
 Structural Analysis  
 Perceived Social Achievement

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
07	<u>LEARNING - OTHERS-SELF ORIENTATION: Do</u> <u>your classmates think you are "smart"?</u>	-.753	2.421
04	How often do you help your classmates decide what to do in school?	-.648	2.216
08	Do you think your classmates like you?	-.537	2.020
22	<u>LEARNING - FAMILY RELEVANCES: Do your</u> <u>friends and you like learning at</u> <u>school?</u>	.651	1.345
02	Do you tell your classmates how you feel about schoolwork?	-.546	2.484
16	Do you think your family cares if you fail at school?	.524	1.402

\*Factor sets are arranged in arbitrary  
 sequence to meet logical interpretations.

N = 102  
 Variance accounted  
 for = 65.2%

Appendix V - v  
Non-Indian Pupil Sample  
Structural Analysis  
Perceived Social Achievement

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
02	<u>SELF EXPRESSIVENESS - LEARNING: Do you tell your classmates how you feel about schoolwork?</u>	-.826	1.995
04	<u>SELF PERCEPTION - HELPING: How often do you help your classmates decide what to do in school?</u>	-.726	2.165
14	<u>SIGNIFICANT OTHERS: FAMILY-LEARNING - How happy could you be in a boarding school or boarding home?</u>	-.809	2.844
17	Do you think your family likes you?	.760	1.087
01	How much do you want to get done in your schoolwork?	.732	1.113
15	Do you like doing things and going places with your family?	.696	1.204
12	How much do others in your class help you as you study and learn?	-.689	2.175
09	Do your classmates help you with your homework?	-.675	2.219
11	Do you classmates sometimes feel the same way you feel about going to school?	.642	1.519
10	How much do members of your class want to learn good English?	-.614	2.123
22	Do your friends and you like learning at school?	-.520	1.877
13	<u>SIGNIFICANT OTHERS: FAMILY-PEERS AMBI-VALENCES - Do you feel happy when your family succeeds?</u>	-.733	1.061
06	Do you like to do what the rest of your class is doing?	-.535	1.574
16	Do you think your family cares if you fail at school?	-.512	1.033
21	<u>SIGNIFICANT OTHERS: NEIGHBORHOOD FRIENDS-WORK-ACTIVITY ORIENTATION - How often do you have a good time or work together with friends that live near you?</u>	.771	1.648
19	Do you work to get jobs well done with your friends who live near you?	.687	1.781
20	Do you like doing what your friends who live near you do?	.662	1.784



Appendix V - v (Cont'd.)  
 Non-Indian Pupil Sample  
 Structural Analysis  
 Perceived Social Achievement

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
23	<u>SIGNIFICANT OTHERS: NEIGHBORHOOD FRIENDS-LIKING ORIENTATION - Do you think your friends who live near you like you?</u>	.833	1.596
24	How often do your neighborhood friends really like you because you do something well?	.638	1.944
07	<u>LEARNING SELF-OTHERS ORIENTATION: Do your classmates think you are "smart"?</u>	-.810	2.122
08	Do you think your classmates like you?	-.567	1.866

\*Factor sets are arranged in arbitrary sequence  
 to meet logical interpretations.

N = 239  
 Variance accounted  
 for = 60.6%

Appendix VI - i  
Teaching Dimensions of Learning Behavior  
Response Designations (Based upon Total Sample Structural Analysis Format)

Item No.	Questions	Total % Response	Indian % Response	Non-Indian % Response	Integrated Indian % Response	Non-Integrated Indian % Response
20	<u>EXPRESSIVE DIMENSION: Does this teacher try to make the class "fun" for the pupils?</u>					
	a. Almost always.	26.5	26.0	26.6	26.1	26.0
	b. Sometimes.	55.7	58.5	55.1	52.2	62.3
	c. Nearly never tries to make the class "fun."	17.8	15.4	18.4	21.7	11.7
17	Does this teacher show that he wants to make the work interesting or "fun" for the pupils?					
	a. Almost always.	29.8	25.6	30.8	25.0	26.0
	b. Sometimes.	43.5	43.2	43.6	47.0	40.3
	c. Not very often.	15.8	24.8	13.6	20.8	27.3
	d. Practically never.	10.9	6.4	12.0	6.3	6.5
22	Is this teacher usually fair when he has decided something about a pupil?					
	a. Always fair.	44.1	32.3	32.8	34.0	31.2
	b. Usually fair.	42.7	44.4	52.7	34.0	50.6
	c. Fair to most pupils.	8.1	21.0	10.3	27.7	16.9
	d. Not fair to most pupils.	3.9	2.4	4.3	4.3	1.3
27	In this class are you supposed to use the teacher's ideas, the ideas in the book, or your own ideas?					
	a. Our own ideas.	19.4	30.5	16.9	21.3	36.6
	b. We use all three of these ways of learning.	60.3	42.4	64.5	44.7	40.8
	c. We use only the teacher's ideas and the ideas in books, not our ideas.	20.2	27.1	18.6	34.0	22.5
25	<u>EXPRESSIVE-HELPLEFULNESS DIMENSION: Does this teacher show that he will help you with school work or anything you need?</u>					
	a. Never.	4.1	4.8	3.9	2.1	6.5
	b. Helps with school work but nothing else.	17.7	20.8	16.9	25.0	18.2
	c. Helps more with school work than other things.	38.7	28.8	41.1	25.0	31.2
	d. Helps with both school work and anything we need.	35.8	40.0	34.8	45.8	36.4
	e. Helps us with other things we need more than school-work.	3.8	5.6	3.3	2.1	7.8

Appendix VI - ii  
Teaching Dimensions of Learning Behavior  
Response Designations (Based upon Total Sample Structural Analysis Format)

Item No.	Questions	Total % Response	Indian % Response	Non-Indian % Response	Integrated Indian % Response	Non-Integrated Indian % Response
24	Does the teacher make sure you learn the facts or does he care more for how pupils feel?					
	a. The teacher doesn't care about the facts or how we feel.	4.9	5.6	4.7	6.3	5.2
	b. The teacher just cares about the facts.	24.9	28.0	24.1	20.8	32.5
	c. Makes sure we learn the facts, but cares how we feel.	65.2	56.0	67.5	60.4	53.2
	d. Cares more for how we feel than about our learning the facts.	5.0	10.4	3.7	12.5	9.1
23	Does this teacher help you with the work or let you work it out?					
	a. I hardly get any help.	9.3	12.8	8.4	8.3	15.6
	b. I get some help but not as much as I need.	31.2	57.6	24.8	50.0	62.3
	c. I get all the help I need.	59.5	29.6	66.8	41.7	22.1
21	<u>EXPRESSIVE-LIKING-TASK ASSIGNMENT DIMENSION: Does this teacher show that he likes or dislikes pupils in this class?</u>					
	a. Likes all pupils.	44.1	44.0	44.1	43.8	44.2
	b. Likes most pupils.	42.7	36.0	44.3	39.6	33.8
	c. Likes some pupils.	8.1	13.6	6.8	4.2	19.5
	d. Likes just a few pupils.	3.9	4.0	3.9	8.3	1.3
	e. Likes none of the pupils.	1.2	2.4	1.0	4.2	1.3
19	Does this teachershow that he likes or dislikes pupils in this class?					
	a. He shows that he dislikes none of the pupils.	55.9	52.0	56.8	66.0	43.4
	b. He shows that he dislikes a few of the pupils.	30.3	30.9	30.2	19.1	38.2
	c. He shows that he dislikes some pupils.	9.7	12.2	9.1	6.4	15.8
	d. He shows that he dislikes most pupils.	2.4	3.3	2.1	6.4	1.3
	e. He shows that he dislikes everyone in the class.	1.7	1.6	1.8	2.1	1.3

Appendix VI - iii  
Teaching Dimensions of Learning Behavior  
Response Designations (Based upon Total Sample Structural Analysis Format)

Item No.	Questions	Total % Response	Indian % Response	Non-Indian % Response	Integrated Indian % Response	Non-Integrated Indian % Response
01	Are you given new work in this classroom before you are able to get the right answers to the old work?					
	a. Not until I can do the old kind correctly.	32.9	37.6	31.8	35.4	39.0
	b. Sometimes.	59.8	52.8	61.5	54.2	51.9
	c. Almost always.	7.3	9.6	6.7	10.4	9.1
08	<u>AUTHORITY DIMENSION: Do pupils have to get permission to leave their seats in this class or not?</u>					
	a. We never leave our seats without permission.	25.6	38.4	22.5	50.0	31.2
	b. We can leave our seats without permission if we follow the rules.	57.6	39.2	62.0	33.3	42.9
	c. We can leave our seats without permission almost any time.	16.8	22.4	15.4	16.7	26.0
02	Does this teacher see to it that you complete all written assignments?					
	a. Makes sure we complete nearly all of them.	54.2	54.0	54.2	46.8	58.4
	b. Sometimes makes sure we complete them.	35.7	38.7	35.0	42.6	36.4
	c. Hardly ever makes sure we complete them.	10.1	7.3	10.8	10.6	5.2
14	<u>AUTHORITY-TASK DIMENSION: How often would you say this teacher has changed assignments this year because the pupils didn't like them?</u>					
	a. Hardly ever.	68.4	48.4	73.2	51.1	46.8
	b. A few times when the pupils had good reasons.	25.7	33.9	23.7	34.0	33.8
	c. Quite often, whether the pupils had good reasons or not.	4.9	14.5	2.5	14.9	14.3
	d. Practically every time anyone did not like them.	1.1	3.2	0.6	0.0	5.2

Appendix VI - iv  
Teaching Dimensions of Learning Behavior  
Response Designations (Based upon Total Sample Structural Analysis Format)

Item No.	Questions	Total % Response	Indian % Response	Non-Indian % Response	Integrated Indian % Response	Non-Integrated Indian % Response
11	When the teacher has made up his mind about something, has he ever changed it when the pupils did not like it?					
	a. Hardly ever.	34.4	25.8	36.4	25.5	26.0
	b. A few times when the pupils had good reasons.	54.7	46.0	56.8	46.8	45.5
	c. Quite often, whether the pupils had good reasons or not.	7.5	21.8	4.0	19.1	23.4
	d. Nearly every time anyone did not like the work.	3.4	6.5	2.7	8.5	5.2
04	What does the teacher do when he is teaching the class something new and the class doesn't understand?					
	a. Tries to explain it again another way.	82.1	65.3	86.1	77.1	57.9
	b. Gives the same explanation over again.	14.8	28.2	11.6	18.8	34.2
	c. Moves on to something else even though we don't understand.	3.1	6.5	2.3	4.2	7.9
06	<u>TASK DIMENSION: When you have learned a certain kind of work in school, do you use it again during the year?</u>					
	a. We keep using the work over and over again.	15.2	13.1	15.7	11.1	14.3
	b. We keep using the work sometimes after we have taken up new work.	69.6	57.1	72.7	59.0	55.8
	c. We hardly ever use the old kind of work after we have new work.	15.2	29.8	11.6	29.7	29.9
03	Does this teacher review work you have had before starting new work?					
	a. Reviews every lesson.	17.2	20.0	16.5	18.8	20.8
	b. Reviews most lessons.	29.6	26.4	30.4	27.1	26.0
	c. Reviews some lessons but, not every day.	41.4	46.4	40.2	47.9	45.5
	d. Hardly ever reviews lessons.	11.8	7.2	12.9	6.3	7.8

Appendix VI - v  
Teaching Dimensions of Learning Behavior  
Response Designations (Based upon Total Sample Structural Analysis Format)

Item No.	Questions	Total % Response	Indian % Response	Non-Indian % Response	Integrated Indian % Response	Non-Integrated Indian % Response
05	How often do you show the teacher what you know by writing or telling an answer?					
	a. Several times every day.	27.7	17.9	30.0	12.5	21.3
	b. Once every day.	12.2	16.3	11.2	18.8	14.7
	c. Almost every day.	24.9	22.0	25.6	16.7	25.3
	d. Several times a week.	23.3	29.3	21.9	22.9	33.3
	e. Never.	11.9	14.6	11.2	29.2	5.3
15	<u>TEACHER-PUPIL INTERACTION DIMENSION: After you know what you are going to do in this class, who usually decides how you are going to do it?</u>					
	a. The teacher decides and tells us.	53.1	52.0	53.3	46.8	55.3
	b. The teacher listens to our ideas, but he decides.	19.5	20.3	19.3	25.5	17.1
	c. The teacher talks it over with us and helps us to decide.	20.7	18.7	21.2	25.5	14.5
	d. The teacher lets us decide.	6.8	8.9	6.2	2.1	13.2
10	When the class starts a new kind of work, who plans how you will do the work?					
	a. We do it the way the teacher plans it.	59.1	62.4	58.3	66.7	59.7
	b. The teacher and pupils plan it together.	25.9	20.0	27.3	16.7	22.1
	c. The teacher lets us plan it, but gives advice if we ask for it.	13.3	14.4	13.0	12.5	15.6
	d. The plan is entirely up to the pupils.	1.7	3.2	1.4	4.2	2.6



Appendix VI - vi  
Teaching Dimensions of Learning Behavior  
Response Designations (Based upon Total Sample Structural Analysis Format)

Item No.	Questions	Total % Response	Indian % Response	Non-Indian % Response	Integrated Indian % Response	Non-Integrated Indian % Response
12	<u>TEACHER-PUPIL-TASK DIMENSION: What does the teacher do when he and the pupils disagree about some fact?</u>					
	a. He doesn't help the pupils to talk about it.	7.5	9.8	7.0	4.2	13.3
	b. He helps the pupils to talk about it, but like the teacher sees it.	23.8	28.5	22.7	22.9	32.0
	c. He helps the pupils to talk about it and we try to see how the teacher thinks about it and how the class thinks about it.	68.7	61.8	70.3	72.9	54.7
07	<u>How are your exercises or test papers usually corrected?</u>					
	a. I don't know, papers aren't returned.	2.7	4.8	2.2	0.0	7.8
	b. A grade is given but all mistakes are not marked.	14.3	24.2	11.8	21.3	26.0
	c. All mistakes are marked.	35.2	26.6	37.3	27.7	26.0
	d. All mistakes are marked and we are shown how the work is wrong.	47.7	44.4	48.5	51.1	40.3
16	<u>SMALL GROUP DIMENSION: How many small groups have you been in this year in this class?</u>					
	a. None.	21.7	18.5	22.5	18.8	18.4
	b. One, two or three.	49.5	33.1	53.5	47.9	23.7
	c. Three.	7.7	12.9	6.4	4.2	18.4
	d. Four or more.	13.7	24.2	11.1	18.8	27.6
	e. Five or more.	7.4	11.3	6.4	10.4	11.8

Appendix VI - vii  
Teaching Dimensions of Learning Behavior  
Response Designations (Based upon Total Sample Structural Analysis Format)

Item No.	Questions	Total % Response	Indian % Response	Non-Indian % Response	Integrated Indian % Response	Non-Integrated Indian % Response
09	How much instruction does the teacher give in group project work?					
	a. We never have group project work.	22.0	14.5	36.4	16.7	13.2
	b. The teacher tells the group exactly <u>what</u> to do and <u>how</u> to do it.	29.2	44.4	56.8	43.8	44.7
	c. The teacher tells the group <u>what</u> to do and lets us decide <u>how</u> to do it.	37.3	30.6	4.0	31.3	30.3
	d. The teacher lets the group decide almost everything.	11.4	10.5	2.7	8.3	11.8

Appendix VI - viii  
Teaching Dimensions of Learning Behavior  
Structural Analysis - Total Sample

<u>Item No.*</u>		<u>Rotated Factor</u>	
		<u>Scores</u>	<u>Median</u>
20	<u>EXPRESSIVE DIMENSION: Does this teacher try to make the class "fun" for the pupils?</u>	.731	1.922
17	Does this teacher show that he wants to make the work interesting or "fun" for the pupils?	.726	1.964
22	Is this teacher usually fair when he has decided something about a pupil?	.548	1.839
27	In this class are you supposed to use the teacher's ideas, the ideas in the book, or your own ideas?	.541	2.007
25	<u>EXPRESSIVE-HELPLEFULNESS DIMENSION: Does this teacher show that he will help you with school work or anything you need?</u>	.716	3.231
24	Does the teacher make sure you learn the facts or does he care more for how pupils feel?	.666	2.810
23	Does this teacher help you with the work or let you work it out?	.658	2.660
21	<u>EXPRESSIVE-LIKING-TASK ASSIGNMENT DIMENSION: Does this teacher show that he likes or dislikes pupils in this class (likes)?</u>	.680	1.639
19	Does this teacher show that he likes or dislikes pupils in this class (dislikes)?	.661	1.395
01	Are you given new work in this classroom before you are able to get the right answers to the old work?	.640	1.786
08	<u>AUTHORITY DIMENSION: Do pupils have to get permission to leave their seats in this class or not?</u>	.751	1.923
02	Does this teacher see to it that you complete all written assignments?	.613	1.423
14	<u>AUTHORITY-TASK DIMENSION: How often would you say this teacher has changed assignments this year because the pupils didn't like them?</u>	.643	1.231
11	When the teacher has made up his mind about something, has he ever changed it when the pupils did not like it?	.637	1.786
04	What does the teacher do when he is teaching the class something new and the class doesn't understand?	.541	1.109

Appendix VI - viii (Cont'd.)  
Teaching Dimensions of Learning Behavior  
Structural Analysis - Total Sample

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
06	<u>TASK DIMENSION: When you have learned a certain kind of work in school, do you use it again during the year?</u>	.683	2.001
03	Does this teacher review work you have had before starting new work?	.564	2.577
05	How often do you show the teacher what you know by writing or telling an answer?	.537	2.906
15	<u>TEACHER-PUPIL INTERACTION DIMENSION: After you know what you are going to do in this class, who usually decides how you are going to do it?</u>	.721	1.442
10	When the class starts a new kind of work, who plans how you will do the work?	.683	1.346
12	<u>TEACHER-PUPIL-TASK DIMENSION: What does the teacher do when he and the pupils disagree about some fact?</u>	.734	2.772
07	How are your exercises or test papers usually corrected?	.563	3.439
16	<u>SMALL GROUP DIMENSION: How many small groups you been in this year in this class?</u>	-.744	2.071
09	How much instruction does the teacher give in group project work?	-.606	2.457

\*Factor sets are arranged in arbitrary sequence to meet logical interpretations.

N = 644  
Analysis accounted  
for = 53.6%

Appendix VI -ix  
Teaching Dimensions of Learning Behavior  
Structural Analysis - Indian Sample

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	
			<u>Median</u>
27	<u>EXPRESSIVE DIMENSION: In this class are you supposed to use the teacher's ideas, the ideas in the book, or your own ideas?</u>	.717	1.960
22	Is this teacher usually fair when he has decided something about a pupil?	.693	1.900
19	<u>EXPRESSIVE-LIKING DIMENSION: Does this teacher show that he likes or dislikes pupils in this class (dislikes)?</u>	-.749	1.461
21	Does this teacher show that he likes or dislikes pupils in this class (likes)?	-.748	1.667
26	<u>EXPRESSIVE-TASK DIMENSION I: Does this teacher give you credit for how well you do in class?</u>	-.717	2.100
02	Does this teacher see to it that you complete all written assignments?	-.642	1.425
25	<u>EXPRESSIVE-TASK DIMENSION II: Does this teacher show that he will help you with school work or anything you need?</u>	-.718	3.347
04	What does the teacher do when he is teaching the class something new and the class doesn't understand?	.700	1.265
23	Does this teacher help you with the work or let you work it out?	-.550	2.146
24	<u>EXPRESSIVE-INTERACTION DIMENSION: Does the teacher make sure you learn the facts or does he care more for how the pupils feel?</u>	-.744	2.793
15	After you know what you are going to do in this class, who usually decides how you are going to do it?	-.667	1.461
01	<u>TASK-AUTHORITY DIMENSION: Are you given new work before you are able to get the right answers to the old work?</u>	.716	1.735
14	How often would you say this teacher has changed assignments this year because the pupils didn't like them?	.690	1.594
06	<u>TASK DIMENSION: When you have learned a certain kind of work in school do you use it again during the year?</u>	-.679	2.155
03	Does this teacher review work you have had before starting new work?	-.674	2.578

Appendix VI - 1x (Cont'd.)  
Teaching Dimensions of Learning Behavior  
Structural Analysis - Indian Sample

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
07	<u>TASK-EVALUATION DIMENSION:: How are your exercises or test papers usually corrected?</u>	-.788	3.288
13	<u>TEACHER-PUPIL-TASK DIMENSION: When the teacher asks pupils to do something they do not want to do, does he explain why they have to do it?</u>	-.585	1.594
20	Does this teacher try to make the class "fun" for the pupils?	-.578	1.910
12	What does the teacher do when he and the pupils disagree about some fact in class?	.534	2.691
09	<u>SMALL GROUP DIMENSION: How much instruction does the teacher give in group project work?</u>	.746	2.300
16	How many small groups have you been in this year in class?	.690	2.451

\*Factor sets are arranged in arbitrary  
sequence to meet logical interpretations.

N = 125  
Variance accounted  
for = 61.4%



Appendix VI - x  
Teaching Dimensions of Learning Behavior  
Structural Analysis - Integrated Indian Sample

Item No.*		Rotated Factor	
		Scores	Median
25	<u>EXPRESSIVE DIMENSION: Does this teacher show that he will help you with school work or anything you need?</u>	-.898	3.417
18	Does the teacher ask you questions in a way which makes you afraid, or is he kind?	.844	1.423
21	Does this teacher show that he likes or dislikes pupils in this class (likes)?	.828	1.658
20	<u>EXPRESSIVE-"FUN" DIMENSION: Does this teacher try to make the class "fun" for the pupils?</u>	-.878	1.958
17	Does this teacher show that he wants to make the work interesting or "fun" for the pupils?	-.709	2.022
23	<u>EXPRESSIVE-AUTHORITY DIMENSION: Does this teacher help you with the work or let you work it out?</u>	.903	2.333
12	What does the teacher do when he and the pupils disagree about some fact in class?	.734	2.814
26	<u>EXPRESSIVE-TASK DIMENSION: Does this teacher give you credit for how well you do in class?</u>	.953	1.889
09	<u>AUTHORITY DIMENSION: How much instruction does the teacher give in group project work?</u>	-.858	2.262
15	After you know what you are going to do in this class, who usually decides how you are going to do it?	.664	1.625
10	When the class starts a new kind of work, who plans how you will do the work?	.642	1.250
02	Does this teacher see to it that you complete all written assignments?	-.494	1.575
13	<u>AUTHORITY-TASK DIMENSION: When the teacher asks pupils to do something they do not want to do, does he explain why they have to do it?</u>	.906	1.720
19	Does this teacher show that he likes or dislikes pupils in the class (dislikes)?	.745	1.258
06	When you have learned a certain kind of work in school, do you use it again during the year?	-.682	2.179
14	How often would you say this teacher has changed assignments this year because the pupils didn't like them?	.525	1.479

Appendix VI - x (Cont'd.)  
Teaching Dimensions of Learning Behavior  
Structural Analysis - Integrated Indian Sample

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
08	<u>AUTHORITY-EXPRESSION DIMENSION: Do pupils have to get permission to leave their seats in this class or not?</u>	.772	1.500
27	In this class are you supposed to use the teacher's ideas, the ideas in the book, or your own ideas?	-.765	2.143
03	<u>TASK DIMENSION: Does this teacher review work you have had before starting new work?</u>	-.938	2.587
05	How often do you show the teacher what you know by writing or telling an answer?	-.860	3.591
01	Are you given new work in this classroom before you are able to get the right answers to the old work?	.777	1.769
16	How many small groups have you been in this year in this class?	-.677	2.152
07	How are your exercises or test papers usually corrected?	-.619	3.521
04	<u>TASK-EXPRESSION DIMENSION: What does the teacher do when he is teaching the class something new and the class doesn't understand?</u>	-.973	1.149
24	Does this teacher make sure you learn the facts or does he care more for how pupils feel?	-.546	2.879

\*Factor sets are arranged in arbitrary sequence to meet logical interpretations.

N = 19  
Variance accounted  
for = 86.2%

Appendix VI - xi  
Teaching Dimensions of Learning Behavior  
Structural Analysis - Non-Integrated Indian Sample

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	
			<u>Median</u>
26	<u>EXPRESSIVE DIMENSION: Does this teacher give you credit for how well you do in class?</u>	-.871	2.190
22	Is this teacher usually fair when he has decided something about a pupil?	-.576	1.872
17	<u>EXPRESSIVE AMBIVALENCE DIMENSION: Does this teacher show that he wants to make the work interesting or "fun" for the pupils?</u>	.793	2.097
15	After you know what you are going to do in this class, who usually decides how you are going to do it?	.741	1.405
19	Does this teacher show that he likes or dislikes pupils in the class (dislikes)?	.626	1.672
27	<u>EXPRESSIVE-TASK DIMENSION: In this class, are you supposed to use the teacher's ideas, the ideas in the book, or your own ideas?</u>	.717	1.828
05	How often do you show the teacher what you know by writing or telling an answer?	.675	3.053
08	Do pupils have to get permission to leave their seats in this class or not?	.494	1.939
12	<u>AUTHORITY-CONFLICT DIMENSION: What does the teacher do when he and the pupils disagree about some fact in class?</u>	-.799	2.585
23	Does this teacher help you with the work or let you work it out?	-.699	2.052
11	<u>AUTHORITY-FEELING DIMENSION: When the teacher has made up his mind about something, has he never changed it when the pupils did not like it?</u>	.835	2.029
24	Does this teacher make sure you learn the facts or does he care more for how pupils feel?	.571	2.732
13	<u>TEACHER-PUPIL-TASK DIMENSION: When the teacher asks pupils to do something they do not want to do, does he explain why they have to do it?</u>	.872	1.487
20	Does this teacher try to make the class "fun" for the pupils?	.530	1.885

Appendix VI - xi (Cont'd.)  
Teaching Dimensions of Learning Behavior  
Structural Analysis - Non-Integrated Indian Sample

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	
			<u>Median</u>
14	<u>ASSIGNMENT DIMENSION: How often would you say this teacher has changed assignments this year because the pupils didn't like them?</u>	.800	1.596
04	<u>TASK-AUTHORITY DIMENSION: What does the teacher do when he is teaching the class something new and the class doesn't understand?</u>	.808	1.364
02	Does this teacher see to it that you complete all written assignments?	.727	1.356
10	When the class starts a new kind of work, who plans how you will do the work?	-.660	1.337
06	<u>TASK-EXPRESSION DIMENSION: When you have learned a certain kind of work in school, do you use it again during the year?</u>	-.851	2.140
21	Does this teacher show that he likes or dislikes pupils in this class (likes)?	-.743	1.673
18	Does the teacher ask you questions in a way which makes you afraid, or is he kind?	-.666	1.820
16	<u>SMALL GROUP DIMENSION: How many small groups have you been in this year in this class?</u>	-.801	2.929
09	How much instruction does the teacher give in group project work?	-.672	2.324
25	Does this teacher show that he will help you with school work or anything you need?	-.613	3.313

\*Factor sets are arranged in arbitrary sequence to meet logical interpretations.

N = 39  
Variance accounted for = 76.8%

Appendix VI - xii  
Teaching Dimensions of Learning Behavior  
Structural Analysis - Non-Indian Sample

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
17	<u>EXPRESSIVE DIMENSION: Does this teacher show that he wants to make the work interesting or "fun" for the pupils?</u>	-.804	1.940
20	Does this teacher try to make the class "fun" for the pupils?	-.789	1.926
21	Does this teacher show that he likes or dislikes pupils in this class(likes)?	-.609	1.634
13	When the teacher asks pupils to do something they do not want to do, does he explain why they have to do it?	-.571	1.962
22	Is this teacher usually fair when he has decided something about a pupil?	-.566	1.827
23	<u>EXPRESSIVE-HELPLEFULNESS DIMENSION: Does this teacher help you with the work or let you work it out?</u>	-.673	2.751
24	Does the teacher make sure you learn the facts or does he care more for how the pupils feel?	-.669	2.814
25	Does this teacher show that he will help you with school work or anything you need?	-.666	3.211
26	Does this teacher give you credit for how well you do in class?	-.623	1.900
10	<u>AUTHORITY DIMENSION: When the class starts a new kind of work, who plans how you will do the work?</u>	.685	1.357
15	After you know what you are going to do in this class, who usually decides how you are going to do it?	.632	1.438
09	How much instruction does the teacher give in group project work?	.558	2.515
11	When the teacher has made up his mind about something, has he ever changed it when the pupils did not like it?	.544	1.739
14	How often would you say this teacher has changed assignments this year because the pupils didn't like them?	.480	1.183
02	<u>AUTHORITY-TASK DIMENSION: Does this teacher see to it that you complete all written assignments?</u>	.689	1.422
04	What does the teacher do when he is teaching the class something new and the class doesn't understand?	.639	1.081



Appendix VI - xii (Cont'd.)  
Teaching Dimensions of Learning Behavior  
Structural Analysis - Non-Indian Sample

<u>Item No.*</u>		<u>Rotated Factor Scores</u>	<u>Median</u>
05	<u>TASK DIMENSION: How often do you show the teacher what you know by writing or telling an answer?</u>	-.698	2.841
03	Does this teacher review work you have had before starting new work?	-.621	2.577
01	Are you given new work in this classroom before you are able to get the right answers to the old work?	.529	1.796
06	When you have learned a certain kind of work in school, do you use it again during the year?	-.525	1.972
07	<u>TASK-EXPRESSIVE-DISLIKE DIMENSION: How are your exercises or test papers usually corrected?</u>	-.694	3.466
19	Does this teacher show that he likes or dislikes pupils in this class (dislikes)	.536	1.380
18	<u>EXPRESSIVE-SMALL GROUP DIMENSION: Does this teacher ask you questions in a way which makes you afraid or is he kind?</u>	.731	1.340
16	How many small groups have you been in this year in this class?	.710	2.015

\*Factor sets are arranged in arbitrary sequence to meet logical interpretations.

N = 208  
Analysis accounted  
for = 54.2%



Appendix VII  
 Ethnicity  
 Multiple Regression Analysis I

Variable	Regression Coefficient	Std. Error of Reg. Coef.	Computed T. Value
Integration of Classroom	0.77558	0.03584	21.643
Protestant Ethic Subscale	-.01618	0.00424	-3.812
Age	0.02892	0.00782	3.699
PSA: Learning-Others	-0.03770	0.01303	-2.892
TDLB: Authority-Task	-0.04427	0.01324	-3.343
Morale: School (As an Institution) Morale	0.03217	0.00827	3.891
Morale: School Anxiety	-0.03316	0.01531	-2.166
TDLB: Task Dimension	-0.03282	0.01618	-2.029
Hollingshead Occupation of Family Wage Earner	0.01782	0.00751	2.373
Conformity to Classroom	0.02675	0.01431	1.870
Teacher Study Group I - II Pupils	0.03914	0.02160	1.812
Intercept	0.50097		
Multiple Correlation Coefficient adjusted for df			0.781
Std. Error of Estimate adjusted for df			0.249
F Value			95.547

Appendix VIII  
Integration  
Multiple Regression Analysis I

Variable	Regression Coefficient	Std. Error of Reg. Coef.	Computed T Value
Ethnicity	0.52862	0.02299	22.998
Teacher Study Group I - II Pupils	-0.13619	0.01697	-8.024
TDLB: Expressive Helpfulness	0.03071	0.00893	3.440
PSA: Learning-Others	-0.03610	0.01051	-3.436
TDLB: Authority-Task	-0.02438	0.01100	-2.215
TDLB: Task Dimension	0.02867	0.01367	2.097
Sex	0.03649	0.01676	2.177
Morale: Teacher Morale	-0.01127	0.00486	-2.320
Morale: School Anxiety	0.01904	0.01192	1.598
Intercept	0.60827		
Multiple Correlation Coefficient adjusted for df			0.777
Std. Error of Estimate adjusted for df			0.204
F Value			113.710

Appendix IX  
Sex with Morale, Perceived Social Achievement, Teaching Dimensions, and Protestant Ethic Indices  
Chi Square Tables @ least .02 Level of Significance

Sex with Teacher Morale			
	No		
	Endorsement	Sometimes	Endorsement
Male	<u>100</u> / 32.8	<u>126</u> / 41.3	<u>79</u> / 25.9
Female	<u>71</u> / 24.7	<u>107</u> / 37.3	<u>109</u> / 38.0
$\chi^2 = 10.71$ Sig. @ .004 Gamma = .21			

Sex with Dropout Morale			
	No		
	Endorsement	Sometimes	Endorsement
Male	<u>96</u> / 31.5	<u>119</u> / 39.0	<u>90</u> / 29.5
Female	<u>128</u> / 44.6	<u>114</u> / 39.7	<u>45</u> / 15.7
$\chi^2 = 19.14$ Sig. @ .0001 Gamma = -.28			

Sex with School (As an Institution) Morale			
	No		
	Endorsement	Sometimes	Endorsement
Male	<u>142</u> / 46.6	<u>75</u> / 24.6	<u>88</u> / 28.9
Female	<u>91</u> / 31.7	<u>71</u> / 24.7	<u>125</u> / 43.6
$\chi^2 = 17.16$ Sig. @ .0002 Gamma = .27			

Sex with Protestant Ethic		
	More	Less
	Endorsement	Endorsement
Male	<u>144</u> / 47.4	<u>160</u> / 52.6
Female	<u>104</u> / 36.1	<u>184</u> / 63.9
$\chi^2 = 7.24$ Sig. @ .02 Q Coefficient = 22		

Appendix X - i  
Age with Morale Indices  
Chi Square Tables @ least .003 Level of Significance

Age with Teacher Morale				Age with School (As an Institution) Morale			
			No				No
	Endorsement	Sometimes	Endorsement		Endorsement	Sometimes	Endorsement
11 yr. or less	<u>6</u> / 8.0	<u>24</u> / 32.0	<u>45</u> / 60.0	11 yr. or less	<u>11</u> / 14.7	<u>16</u> / 21.3	<u>48</u> / 64.0
12 yr.	<u>51</u> / 25.2	<u>88</u> / 43.6	<u>63</u> / 31.2	12 yr.	<u>72</u> / 35.6	<u>58</u> / 28.7	<u>72</u> / 35.6
13 yr.	<u>53</u> / 32.7	<u>65</u> / 40.1	<u>44</u> / 27.2	13 yr.	<u>65</u> / 40.1	<u>43</u> / 26.5	<u>54</u> / 33.3
14 yr.	<u>56</u> / 40.6	<u>57</u> / 41.3	<u>25</u> / 18.1	14 yr.	<u>70</u> / 50.7	<u>33</u> / 23.9	<u>35</u> / 25.4
15 yr. or more	<u>20</u> / 32.3	<u>22</u> / 35.5	<u>20</u> / 32.3	15 yr. or more	<u>28</u> / 45.2	<u>13</u> / 21.0	<u>21</u> / 33.9
$\chi^2 = 50.59$ Sig. @ .0000    Gamma = -.25				$\chi^2 = 40.78$ Sig. @ .0000    Gamma = -.23			

Age with Peer Morale			
			No
	Endorsement	Sometimes	Endorsement
11 yr. or less	<u>11</u> / 14.7	<u>19</u> / 25.3	<u>45</u> / 60.0
12 yr.	<u>61</u> / 30.2	<u>56</u> / 27.7	<u>85</u> / 42.1
13 yr.	<u>46</u> / 28.4	<u>47</u> / 29.0	<u>69</u> / 42.6
14 yr.	<u>48</u> / 34.8	<u>38</u> / 27.5	<u>52</u> / 37.7
15 yr. or more	<u>31</u> / 50.0	<u>12</u> / 19.4	<u>19</u> / 30.6
$\chi^2 = 24.75$ Sig. @ .001    Gamma = -.18			

Appendix X - ii  
Age with Morale Indices  
Chi Square Tables @ least .003 Level of Significance

<u>Age with School Drop-out Morale</u>				
	<u>No</u>			
	<u>Endorsement</u>	<u>Sometimes</u>	<u>Endorsement</u>	
11 yr. or less	<u>38/</u> 50.7	<u>25/</u> 33.3	<u>12/</u> 16.0	
12 yr.	<u>90/</u> 44.6	<u>78/</u> 38.6	<u>34/</u> 16.8	
13 yr.	<u>53/</u> 32.7	<u>72/</u> 44.4	<u>37/</u> 22.8	
14 yr.	<u>44/</u> 31.9	<u>50/</u> 36.2	<u>44/</u> 31.9	
15 yr. or more	<u>17/</u> 27.4	<u>29/</u> 46.8	<u>16/</u> 25.8	
$\chi^2 = 22.84$ Sig. @ .003    Gamma = .20				

<u>Age with School Anxiety Morale</u>				
	<u>No</u>			
	<u>Endorsement</u>	<u>Sometimes</u>	<u>Endorsement</u>	
11 yr. or less	<u>7/</u> 9.3	<u>40/</u> 53.3	<u>28/</u> 37.3	
12 yr.	<u>52/</u> 25.7	<u>108/</u> 53.5	<u>42/</u> 20.8	
13 yr.	<u>41/</u> 25.3	<u>88/</u> 54.3	<u>33/</u> 20.4	
14 yr.	<u>55/</u> 39.9	<u>67/</u> 48.6	<u>16/</u> 11.6	
15 yr. or more	<u>24/</u> 38.7	<u>28/</u> 45.2	<u>10/</u> 16.1	
$\chi^2 = 37.24$ Sig. @ .0000    Gamma = -.25				

Appendix XI  
Age with Perceived Social Achievement Indices  
Chi Square Tables @ least .04 Level of Significance

Age with Learning-Others PSA			
	No		
	Endorsement	Sometimes	Endorsement
11 yr. or less	<u>28</u> / 37.3	<u>32</u> / 42.7	<u>15</u> / 20.0
12 yr.	<u>56</u> / 28.4	<u>105</u> / 53.3	<u>36</u> / 18.3
13 yr.	<u>47</u> / 29.7	<u>64</u> / 40.5	<u>47</u> / 29.7
14 yr.	<u>41</u> / 30.1	<u>60</u> / 44.1	<u>35</u> / 25.7
15 yr. or more	<u>22</u> / 38.6	<u>29</u> / 50.9	<u>6</u> / 10.5
$\chi^2 = 16.15$ Sig. @ .04    Gamma = -.01			

Age with Learning-Self-Others PSA			
	No		
	Endorsement	Sometimes	Endorsement
11 yr. or less	<u>34</u> / 45.3	<u>33</u> / 44.0	<u>8</u> / 10.7
12 yr.	<u>61</u> / 31.0	<u>109</u> / 55.3	<u>27</u> / 13.7
13 yr.	<u>46</u> / 29.1	<u>85</u> / 53.8	<u>27</u> / 17.1
14 yr.	<u>25</u> / 18.4	<u>79</u> / 58.1	<u>32</u> / 23.5
15 yr. or more	<u>12</u> / 21.1	<u>25</u> / 43.9	<u>20</u> / 35.1
$\chi^2 = 32.37$ Sig. @ .0001    Gamma = .25			

Age with Significant Others: Family PSA			
	No		
	Endorsement	Sometimes	Endorsement
11 yr. or less	<u>48</u> / 64.0	<u>19</u> / 25.3	<u>8</u> / 10.7
12 yr.	<u>110</u> / 55.8	<u>52</u> / 26.4	<u>35</u> / 17.8
13 yr.	<u>71</u> / 44.9	<u>53</u> / 33.5	<u>34</u> / 21.5
14 yr.	<u>56</u> / 41.2	<u>48</u> / 35.3	<u>32</u> / 23.5
15 yr. or more	<u>18</u> / 31.6	<u>22</u> / 38.6	<u>17</u> / 29.8
$\chi^2 = 22.89$ Sig. @ .003    Gamma = .22			



Appendix XII  
Age with Teaching Dimensions of Learning Behavior Indices  
Chi Square Tables @ least .003 Level of Significance

Age with Expressive TDLB			
	Less		
	Endorsement	Sometimes	Endorsement
11 yr. or less	<u>13</u> / 17.6	<u>21</u> / 28.4	<u>40</u> / 54.1
12 yr.	<u>68</u> / 34.7	<u>52</u> / 26.5	<u>76</u> / 38.8
13 yr.	<u>61</u> / 38.4	<u>52</u> / 32.7	<u>46</u> / 28.9
14 yr.	<u>58</u> / 43.0	<u>49</u> / 36.3	<u>28</u> / 20.7
15 yr. or more	<u>10</u> / 16.7	<u>25</u> / 41.7	<u>25</u> / 41.7
$\chi^2 = 39.12$ Sig. @ .0000    Gamma = -.13			

Age with Expressive-Liking-Task TDLB			
	Less		
	Endorsement	Sometimes	Endorsement
11 yr. or less	<u>8</u> / 10.8	<u>32</u> / 43.2	<u>34</u> / 45.9
12 yr.	<u>53</u> / 27.0	<u>92</u> / 46.9	<u>51</u> / 26.0
13 yr.	<u>51</u> / 32.1	<u>67</u> / 42.1	<u>41</u> / 25.8
14 yr.	<u>43</u> / 31.9	<u>70</u> / 51.9	<u>22</u> / 16.3
15 yr. or more	<u>11</u> / 18.3	<u>37</u> / 61.7	<u>12</u> / 20.0
$\chi^2 = 33.23$ Sig. @ .0001    Gamma = -.16			

Age with Expressive-Helping TDLB			
	Less		More
	Endorsement	Sometimes	Endorsement
11 yr. or less	<u>47</u> / 63.5	<u>19</u> / 25.7	<u>8</u> / 10.8
12 yr.	<u>73</u> / 37.2	<u>76</u> / 38.8	<u>47</u> / 24.0
13 yr.	<u>67</u> / 42.1	<u>52</u> / 32.7	<u>40</u> / 25.2
14 yr.	<u>44</u> / 32.6	<u>60</u> / 44.4	<u>31</u> / 23.0
15 yr. or more	<u>23</u> / 38.3	<u>17</u> / 28.3	<u>20</u> / 33.3
$\chi^2 = 26.93$ Sig. @ .0007    Gamma = .14			

Age with Authority-Task TDLB			
	Less		More
	Endorsement	Sometimes	Endorsement
11 yr. or less	<u>24</u> / 32.4	<u>39</u> / 52.7	<u>11</u> / 14.9
12 yr.	<u>31</u> / 15.8	<u>116</u> / 59.2	<u>49</u> / 25.0
13 yr.	<u>37</u> / 23.3	<u>94</u> / 59.1	<u>28</u> / 17.6
14 yr.	<u>32</u> / 23.7	<u>88</u> / 65.2	<u>15</u> / 11.1
15 yr. or more	<u>20</u> / 33.3	<u>34</u> / 56.7	<u>6</u> / 10.0
$\chi^2 = 23.13$ Sig. @ .003    Gamma = -.12			

Appendix XIII  
Age with Protestant Ethic, Family Orientation,  
and Conformity to Classroom Indices  
Chi Square @ least .01 Level of Significance

Age with Protestant Ethic		
	More	Less
	Endorsement	Endorsement
11 yr. or less	<u>23</u> / 30.7	<u>52</u> / 69.3
12 yr.	<u>67</u> / 34.0	<u>130</u> / 66.0
13 yr.	<u>77</u> / 48.7	<u>81</u> / 51.3
14 yr.	<u>58</u> / 42.6	<u>78</u> / 57.4
15 yr. or more	<u>26</u> / 45.6	<u>31</u> / 54.4
$\chi^2 = 11.78$ Sig. @ .01 Gamma = -.15		

Age with Family Orientation			
	No		
	Endorsement	Sometimes	Endorsement
11 yr. or less	<u>13</u> / 17.3	<u>24</u> / 32.0	<u>38</u> / 50.7
12 yr.	<u>49</u> / 24.9	<u>37</u> / 18.8	<u>111</u> / 56.3
13 yr.	<u>56</u> / 35.7	<u>33</u> / 21.0	<u>68</u> / 43.3
14 yr.	<u>54</u> / 40.0	<u>42</u> / 31.1	<u>39</u> / 28.9
15 yr. or more	<u>26</u> / 45.6	<u>17</u> / 29.8	<u>14</u> / 24.6
$\chi^2 = 42.72$ Sig. @ .0000 Gamma = -.26			

Appendix XIV  
 Ethnicity with Morale Indices  
 Chi Square @ least .04 Level of Significance

<u>Ethnicity with School (As an Institution) Morale</u>			
	<u>No</u>		
	<u>Endorsement</u>	<u>Sometimes</u>	<u>Endorsement</u>
Non-Indian	<u>213</u> / 40.7	<u>134</u> / 25.6	<u>176</u> / 33.7
Indian	<u>38</u> / 31.1	<u>29</u> / 23.8	<u>55</u> / 45.1
$\chi^2 = 6.07$		Sig. @ .04	
		Gamma = .19	

<u>Ethnicity with Peer Morale</u>			
	<u>No</u>		
	<u>Endorsement</u>	<u>Sometimes</u>	<u>Endorsement</u>
Non-Indian	<u>147</u> / 28.1	<u>135</u> / 25.8	<u>241</u> / 46.1
Indian	<u>51</u> / 41.8	<u>39</u> / 32.0	<u>32</u> / 26.2
$\chi^2 = 16.64$		Sig. @ .0002	
		Gamma = -.31	

<u>Ethnicity with School Anxiety Morale</u>			
	<u>No</u>		
	<u>Endorsement</u>	<u>Sometimes</u>	<u>Endorsement</u>
Non-Indian	<u>133</u> / 25.4	<u>275</u> / 52.6	<u>115</u> / 22.0
Indian	<u>48</u> / 39.3	<u>59</u> / 48.4	<u>15</u> / 12.3
$\chi^2 = 11.77$		Sig. @ .002	
		Gamma = -.29	

Appendix XV  
 Ethnicity with Perceived Social Achievement Indices  
 Chi Square @ least .01 Level of Significance

Ethnicity with Self Expressive PSA				
	No			
	Endorsement	Sometimes	Endorsement	
Non-Indian	96/ 18.3	358/ 68.1	72/ 13.7	
Indian	42/ 34.7	67/ 55.4	12/ 9.9	
$\chi^2 = 15.98$	Sig. @ .0003		Gamma = -.31	

Ethnicity with Self Perception PSA				
	No			
	Endorsement	Sometimes	Endorsement	
Non-Indian	70/ 13.3	391/ 74.3	65/ 12.4	
Indian	62/ 51.2	50/ 41.3	9/ 7.4	
$\chi^2 = 87.18$	Sig. @ .0000		Gamma = -.60	

Ethnicity with Significant Others-Family PSA				
	No			
	Endorsement	Sometimes	Endorsement	
Non-Indian	271/ 51.5	158/ 30.0	97/ 18.4	
Indian	38/ 31.4	45/ 37.2	38/ 31.4	
$\chi^2 = 17.86$	Sig. @ .0001		Gamma = .33	

Ethnicity with Learning-Others PSA				
	No			
	Endorsement	Sometimes	Endorsement	
Non-Indian	125/ 23.8	264/ 50.2	137/ 26.0	
Indian	78/ 64.5	36/ 29.8	7/ 5.8	
$\chi^2 = 78.93$	Sig. @ .0000		Gamma = -.66	

Ethnicity with Learning Relevances PSA				
	No			
	Endorsement	Sometimes	Endorsement	
Non-Indian	155/ 29.5	238/ 45.2	133/ 25.3	
Indian	34/ 28.1	41/ 33.9	46/ 38.0	
$\chi^2 = 8.77$	Sig. @ .01		Gamma = .14	

Ethnicity with Learning-Self-Others PSA				
	No			
	Endorsement	Sometimes	Endorsement	
Non-Indian	166/ 31.6	281/ 53.4	79/ 15.0	
Indian	19/ 15.7	63/ 52.1	39/ 32.2	
$\chi^2 = 24.66$	Sig. @ .0000		Gamma = .40	

Appendix XVI  
 Ethnicity with Teaching Dimensions of Learning Behavior Indices  
 Chi Square @ least .02 Level of Significance

Ethnicity with Expressive-Liking-Task TDLB			
	Less		
	Endorsement	Sometimes	Endorsement
Non-Indian	<u>128</u> / 24.7	<u>249</u> / 48.0	<u>142</u> / 27.4
Indian	<u>46</u> / 37.1	<u>57</u> / 46.0	<u>21</u> / 16.9
$\chi^2 = 10.09$	Sig. @ .006		Gamma = -.26

Ethnicity with Teacher-Pupil-Interaction TDLB			
	Less		More
	Endorsement	Sometimes	Endorsement
Non-Indian	<u>149</u> / 28.7	<u>239</u> / 46.1	<u>131</u> / 25.2
Indian	<u>42</u> / 33.9	<u>65</u> / 52.4	<u>17</u> / 13.7
$\chi^2 = 7.53$	Sig. @ .02		Gamma = -.19

Ethnicity with Authority-Task TDLB			
	Less		More
	Endorsement	Sometimes	Endorsement
Non-Indian	<u>86</u> / 16.6	<u>331</u> / 63.8	<u>102</u> / 19.7
Indian	<u>62</u> / 50.0	<u>52</u> / 41.9	<u>10</u> / 8.1
$\chi^2 = 64.32$	Sig. @ .0000		Gamma = -.57

Ethnicity with Teacher-Pupil-Task TDLB			
	Less		More
	Endorsement	Sometimes	Endorsement
Non-Indian	<u>170</u> / 32.8	<u>275</u> / 53.0	<u>74</u> / 14.3
Indian	<u>28</u> / 22.6	<u>68</u> / 54.8	<u>28</u> / 22.6
$\chi^2 = 7.79$	Sig. @ .02		Gamma = .23

Ethnicity with Task TDLB			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indian	<u>104</u> / 20.0	<u>333</u> / 64.2	<u>82</u> / 15.8
Indian	<u>46</u> / 37.1	<u>64</u> / 51.6	<u>14</u> / 11.3
$\chi^2 = 16.40$	Sig. @ .0003		Gamma = -.31

Ethnicity with Small Group TDLB			
	Less		More
	Endorsement	Sometimes	Endorsement
Non-Indian	<u>153</u> / 29.5	<u>287</u> / 55.3	<u>79</u> / 15.2
Indian	<u>22</u> / 17.7	<u>67</u> / 54.0	<u>35</u> / 28.2
$\chi^2 = 14.64$	Sig. @ .0007		Gamma = .31

Appendix XVII  
 Ethnicity with Protestant Ethic, Family Orientation,  
 Conformity to Classroom Situation Indices  
 Chi Square @ least .0000 Level of Significance

Ethnicity with Protestant Ethic		
	More	No
	Endorsement	Endorsement
Non-Indian	<u>173</u> / 32.9	<u>353</u> / 67.1
Indian	<u>87</u> / 71.9	<u>34</u> / 28.1
$\chi^2 = 60.67$	Sig. @ .0000	Q Coeff.= -.67

Ethnicity with Family Orientation			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indian	<u>145</u> / 27.6	<u>127</u> / 24.2	<u>253</u> / 48.2
Indian	<u>64</u> / 53.3	<u>32</u> / 26.7	<u>24</u> / 20.0
$\chi^2 = 38.24$	Sig. @ .0000	Gamma = -.48	

Ethnicity with Conformity to Classroom Situation			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indian	<u>108</u> / 20.7	<u>198</u> / 37.9	<u>217</u> / 41.5
Indian	<u>60</u> / 50.4	<u>38</u> / 31.9	<u>21</u> / 17.6
$\chi^2 = 48.62$	Sig. @ .0000	Gamma = -.51	



Appendix XVIII  
 Indian Classroom Integration or Non-Integration  
 with Morale, Perceived Social Achievement and  
 Teaching Dimensions of Learning Behavior Indices  
 Chi Square @ least .04 Level of Significance

<u>Indian Integration with Learning Others PSA</u>			
	No		
	Endorsement	Sometimes	Endorsement
Integrated	<u>24</u> / 52.2	<u>17</u> / 37.0	<u>5</u> / 10.9
Non-Integrated	<u>54</u> / 72.0	<u>19</u> / 25.3	<u>2</u> / 2.7
$\chi^2 = 6.34$ Sig. @ .04 Gamma = -.40			

Appendix XIX  
 Primary Alpha Probability  
 Chi Square Control Analyses (See Table X)  
 Sig. @ .0000 - .05 Levels

Sex with Ethnicity		
	Non-Indian	Indian
Male	<u>260</u> / 53.8	<u>51</u> / 41.1
Female	<u>223</u> / 46.2	<u>73</u> / 58.9
$\chi^2 = 5.87$ Sig. @ .05 Gamma = .25		

Age with Ethnicity		
	Non-Indian	Indian
11 yr. or less	<u>65</u> / 12.5	<u>10</u> / 8.3
12 yr.	<u>181</u> / 34.9	<u>21</u> / 17.4
13 yr.	<u>134</u> / 25.9	<u>28</u> / 23.1
14 yr.	<u>102</u> / 19.7	<u>36</u> / 29.8
15 yr. or more	<u>36</u> / 6.9	<u>26</u> / 21.5
$\chi^2 = 37.38$ Sig. @ .0000 Gamma = .38		

Appendix XX  
Chi Square Indices for Sex and Age with Ethnicity

Sex with Ethnicity		
	Non-Indians	Indians
Male	<u>260</u> / 53.8	<u>51</u> / 41.1
Female	<u>223</u> / 46.2	<u>73</u> / 58.9
$\chi^2 = 5.87$		
Sig. @ .05 Q Coefficient = .25		

Age with Ethnicity		
	Non-Indians	Indians
11 yr. or less	<u>65</u> / 86.7 12.5	<u>10</u> / 13.3 8.3
12 yr.	<u>181</u> / 89.6 34.9	<u>21</u> / 10.4 17.4
13 yr.	<u>134</u> / 82.7 25.9	<u>28</u> / 17.3 23.1
14 yr.	<u>102</u> / 73.9 19.7	<u>36</u> / 26.1 29.8
15 yr. or older	<u>36</u> / 58.1 6.9	<u>26</u> / 41.9 21.5
$\chi^2 = 37.38$		
Sig. @ .0000 Gamma = .38		

Appendix XXI.  
 Secondary Chi Square Analyses  
 Morale: Ethnicity with Age-Sex  
 (See Table XI)  
 Sig. @ .00 - .05

Younger Males: 12 yr. and Under Ethnicity with Peer Morale				
	No			
	Endorsement	Sometimes	Endorsement	
Non-Indians	<u>22</u> / 20.8	<u>31</u> / 29.2	<u>53</u> / 50.0	
Indians	<u>7</u> / 58.3	<u>3</u> / 25.0	<u>2</u> / 16.7	
$\chi^2 = 8.83$ Sig. @ .01 Gamma = -.62				

Younger Females: 12 yr. and Under Ethnicity with Peer Morale				
	No			
	Endorsement	Sometimes	Endorsement	
Non-Indians	<u>22</u> / 20.8	<u>31</u> / 29.2	<u>53</u> / 50.0	
Indians	<u>7</u> / 58.3	<u>3</u> / 25.0	<u>2</u> / 16.7	
$\chi^2 = 8.83$ Sig. @ .01 Gamma = -.62				

Older Females: 14 yr. and Over Ethnicity with Peer Morale				
	No			
	Endorsement	Sometimes	Endorsement	
Non-Indians	<u>20</u> / 37.0	<u>10</u> / 18.5	<u>24</u> / 44.4	
Indians	<u>11</u> / 29.7	<u>16</u> / 43.2	<u>10</u> / 27.0	
$\chi^2 = 6.82$ Sig. @ .05 Gamma = -.10				

Older Females: 14 yr. and Over Ethnicity with School Morale				
	No			
	Endorsement	Sometimes	Endorsement	
Non-Indians	<u>24</u> / 44.4	<u>16</u> / 29.6	<u>14</u> / 25.9	
Indians	<u>10</u> / 27.0	<u>7</u> / 18.9	<u>20</u> / 54.1	
$\chi^2 = 7.42$ Sig. @ .02 Gamma = .41				

Appendix XXII-i  
 Secondary Chi Square Analyses  
 Perceived Social Achievement:  
 Ethnicity with Age-Sex  
 (See Table XI)  
 Sig. @ .00 - .03

Older Males: 14 yr. and Older Ethnicity with Self Expressiveness			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	15/ 19.7	59/ 77.6	2/ 2.6
Indians	5/ 20.8	15/ 62.5	4/ 16.7
$\chi^2 = 6.56$ Sig. @ .03    Gamma = .21			

Middle Females: 13 yr. Ethnicity with Self Expressiveness			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	9/ 17.0	36/ 67.0	8/ 15.1
Indians	8/ 57.1	6/ 42.9	0/ 0.0
$\chi^2 = 10.26$ Sig. @ .005    Gamma = -.76			

Younger Females: 12 yr. and Under Ethnicity with Self Expressiveness			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	13/ 12.1	79/ 73.8	15/ 14.0
Indians	7/ 41.2	10/ 58.8	0/ 0.0
$\chi^2 = 10.50$ Sig. @ .005    Gamma = -.72			

Older Females: 14 yr. and Older Ethnicity with Self Expressiveness			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	7/ 13.5	38/ 73.1	7/ 13.5
Indians	14/ 40.0	17/ 48.6	4/ 11.4
$\chi^2 = 8.15$ Sig. @ .01    Gamma = -.42			

Appendix XXII-ii  
 Secondary Chi Square Analyses  
 Perceived Social Achievement  
 Ethnicity with Age-Sex  
 (See Table XI)  
 Sig. @ .00 - .02

Younger Males: 12 yr. and Under  
 Ethnicity with Self Perception

	More Endorsement	Less Endorsement
Non-Indians	8/ 7.8	95/ 92.2
Indians	6/ 50.0	6/ 50.0
$\chi^2 = 14.22$ Sig. @ .0008 Q Coefficient = -.84		

Middle Males: 13 yr.  
 Ethnicity with Self Perception

	No Endorsement Sometimes Endorsement		
Non-Indians	9/ 13.4	48/ 71.6	10/ 14.9
Indians	7/ 53.8	4/ 30.8	2/ 15.4
$\chi^2 = 11.69$ Sig. @ .002 Gamma = -.49			

Older Males: 14 yr. and Over  
 Ethnicity with Self Perception

	No Endorsement Sometimes Endorsement		
Non-Indians	15/ 19.7	51/ 67.1	10/ 13.2
Indians	11/ 45.8	9/ 37.5	4/ 16.7
$\chi^2 = 7.60$ Sig. @ .02 Gamma = -.31			

Younger Females: 12 yr. and Under  
 Ethnicity with Self Perception

	No Endorsement Sometimes Endorsement		
Non-Indians	18/ 16.8	79/ 73.8	10/ 9.3
Indians	12/ 70.6	5/ 29.4	0/ 0.0
$\chi^2 = 23.38$ Sig. @ .0000 Gamma = -.85			

Middle Females: 13 yr.  
 Ethnicity with Self Perception

	No Endorsement Sometimes Endorsement		
Non-Indians	7/ 13.2	39/ 73.6	7/ 13.2
Indians	8/ 57.1	5/ 35.7	1/ 7.1
$\chi^2 = 12.30$ Sig. @ .002 Gamma = -.66			

Older Females: 14 yr. and Over  
 Ethnicity with Self Perception

	No Endorsement Sometimes Endorsement		
Non-Indians	5/ 9.6	41/ 78.8	6/ 11.5
Indians	16/ 45.7	17/ 48.6	2/ 5.7
$\chi^2 = 14.94$ Sig. @ .0006 Gamma = -.65			



Appendix XXII-iii  
 Secondary Chi Square Analyses  
 Perceived Social Achievement:  
 Ethnicity with Age-Sex  
 (See Table XI)  
 Sig. @ .00 - .01

Middle Males: 13 yr.  
 Ethnicity with Significant Others:  
 Neighborhood Friends

	Endorsement		No Endorsement
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>20</u> / 29.9	<u>20</u> / 29.9	<u>27</u> / 40.3
Indians	<u>9</u> / 69.2	<u>3</u> / 23.1	<u>1</u> / 7.7
$\chi^2 = 8.13$ Sig. @ .01 Gamma = -.66			

Younger Females: 12 yr. and Under  
 Ethnicity with Significant Others: Family

	Endorsement		No Endorsement
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>63</u> / 60.7	<u>30</u> / 28.0	<u>12</u> / 11.2
Indians	<u>3</u> / 17.6	<u>8</u> / 47.1	<u>6</u> / 35.3
$\chi^2 = 12.56$ Sig. @ .001 Gamma = .66			

Appendix XXII-iv  
 Secondary Chi Square Analyses  
 Perceived Social Achievement:  
 Ethnicity with Age-Sex  
 (See Table XI)  
 Sig. @ .00 - .01

Younger Males: 12 yr. and Under  
 Ethnicity with Learning-Others

	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	31/ 30.1	51/ 49.5	21/ 20.4
Indians	8/ 66.7	4/ 33.3	0/ 0.0
$\chi^2 = 7.27$	Sig. @ .02		Gamma = -.68

Middle Males: 13 yr.  
 Ethnicity with Learning-Others

	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	16/ 23.9	25/ 37.3	26/ 38.8
Indians	9/ 69.2	4/ 30.8	0/ 0.0
$\chi^2 = 12.33$	Sig. @ .002		Gamma = -.79

Older Males: 14 yr. and Over  
 Ethnicity with Learning-Others

	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	13/ 17.1	38/ 50.0	25/ 32.9
Indians	16/ 66.7	7/ 29.2	1/ 4.2
$\chi^2 = 22.99$	Sig. @ .0000		Gamma = -.78

Younger Females: 12 yr. and Under  
 Ethnicity with Learning-Others

	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	24/ 22.4	56/ 52.3	27/ 25.2
Indians	9/ 52.9	7/ 41.2	1/ 5.9
$\chi^2 = 7.92$	Sig. @ .01		Gamma = -.58

Middle Females: 13 yr.  
 Ethnicity with Learning-Others

	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	10/ 18.9	26/ 49.1	17/ 32.1
Indians	9/ 64.3	4/ 28.6	1/ 7.1
$\chi^2 = 11.65$	Sig. @ .002		Gamma = -.71

Older Females: 14 yr. and Over  
 Ethnicity with Learning-Others

	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	9/ 17.3	31/ 59.6	12/ 23.1
Indians	24/ 68.6	8/ 22.9	3/ 8.6
$\chi^2 = 23.35$	Sig. @ .0000		Gamma = -.70

Appendix XXII-v  
 Secondary Chi Square Analyses  
 Perceived Social Achievement:  
 Ethnicity with Age-Sex  
 (See Table XI)  
 Sig. @ .00 - .03

Younger Males: 12 yr. and Under Ethnicity with Learning-Self-Others			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>40</u> / 38.8	<u>52</u> / 50.5	<u>11</u> / 10.7
Indians	<u>0</u> / 0.0	<u>9</u> / 75.0	<u>3</u> / 25.0
$\chi^2 = 7.68$ Sig. @ .02    Gamma = .73			

Younger Females: 12 yr. and Under Ethnicity with Learning-Self-Others			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>38</u> / 35.5	<u>58</u> / 54.2	<u>11</u> / 10.3
Indians	<u>2</u> / 11.8	<u>10</u> / 58.8	<u>5</u> / 29.4
$\chi^2 = 6.78$ Sig. @ .03    Gamma = .55			

Middle Females: 13 yr. Ethnicity with Learning-Self-Others			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>19</u> / 35.8	<u>31</u> / 58.5	<u>3</u> / 5.7
Indians	<u>2</u> / 14.3	<u>7</u> / 50.0	<u>5</u> / 35.7
$\chi^2 = 10.16$ Sig. @ .006    Gamma = .62			

Appendix XXIII-i  
 Secondary Chi Square Analyses  
 Teaching Dimensions of Learning Behavior  
 Ethnicity with Age-Sex  
 (See Table XII)  
 Sig. @ .00 - .04

Middle Males: 13 yr. Ethnicity with Expressive-Helping			
	Less		More
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>29</u> / 42.6	<u>22</u> / 32.4	<u>17</u> / 25.0
Indians	<u>4</u> / 33.3	<u>1</u> / 8.3	<u>7</u> / 58.3
$\chi^2 = 6.03$ Sig. @ .04 Gamma = -.38			

Younger Females: 12 yr. and Under Ethnicity with Authority		
	Less	More
	Endorsement	Endorsement
Non-Indians	<u>8</u> / 7.8	<u>94</u> / 92.2
Indians	<u>6</u> / 31.6	<u>13</u> / 68.4
$\chi^2 = 6.66$ Sig. @ .03 Q Coefficient = -.68		

Appendix XXIII-ii  
 Secondary Chi Square Analyses  
 Teaching Dimensions of Learning Behavior  
 Ethnicity with Age-Sex  
 (See Table XII)  
 Sig. @ .00 - .02

Younger Males: 12 yr. or Under  
 Ethnicity with Authority-Task

	Less Endorsement	More Endorsement
Non-Indians	<u>8</u> / 20.0	<u>32</u> / 80.0
Indians	<u>3</u> / 100.0	<u>0</u> / 0.0
$\chi^2 = 5.72$ Sig. @ .004 Q Coefficient = -1.00		

Older Males: 14 yr. and Over  
 Ethnicity with Authority-Task

	Less Endorsement	More Endorsement
Non-Indians	<u>3</u> / 7.5	<u>37</u> / 92.5
Indians	<u>7</u> / 41.2	<u>10</u> / 58.8
$\chi^2 = .004$ Sig. @ .02 Q Coefficient = -.79		

Middle Males: 13 yr.  
 Ethnicity with Authority-Task

	Less Endorsement	More Endorsement
Non-Indians	<u>12</u> / 29.3	<u>29</u> / 70.7
Indians	<u>1</u> / 100.0	<u>0</u> / 0.0
$\chi^2 = .17$ Sig. @ .004 Q Coefficient = -1.00		

Middle Females: 13 yr.  
 Ethnicity with Authority-Task

	Less Endorsement	Sometimes Endorsement	More Endorsement
Non-Indians	<u>1</u> / 5.3	<u>15</u> / 78.9	<u>3</u> / 15.8
Indians	<u>7</u> / 50.0	<u>7</u> / 50.0	<u>0</u> / 0.0
$\chi^2 = 9.87$ Sig. @ .007 Gamma = -.90			

Appendix XXIII-iii  
Secondary Chi Square Analyses  
Teaching Dimensions of Learning Behavior  
Ethnicity with Sex-Age  
(See Table XII)  
Sig. @ .00 - .04

Older Males: 14 yr. or Over Ethnicity with Teacher-Pupil-Task				
	Less Endorsement Sometimes Endorsement			
Non-Indians	25/ 32.9	42/ 55.3	9/ 11.8	
Indians	7/ 29.2	9/ 37.5	8/ 33.3	
$\chi^2 = 6.16$ Sig. @ .04 Gamma = .26				

Younger Males: 12 yr. or Under Ethnicity with Small Group				
	Less Endorsement Sometimes Endorsement			
Non-Indians	19/ 18.1	71/ 67.6	15/ 14.3	
Indians	1/ 8.3	5/ 41.7	6/ 50.0	
$\chi^2 = 9.37$ Sig. @ .009 Gamma = .59				

Older Females: 14 yr. or Over Ethnicity with Teacher-Pupil-Task				
	Less Endorsement Sometimes Endorsement			
Non-Indians	16/ 30.2	32/ 60.4	5/ 9.4	
Indians	3/ 8.3	25/ 69.4	8/ 22.2	
$\chi^2 = 7.47$ Sig. @ .02 Gamma = .53				

Younger Females: 12 yr. or Under Ethnicity with Small Group				
	Less Endorsement Sometimes Endorsement			
Non-Indians	34/ 33.3	58/ 56.9	10/ 9.8	
Indians	0/ 0.0	9/ 47.4	10/ 52.6	
$\chi^2 = 24.36$ Sig. @ .0000 Gamma = .86				

Middle Females: 13 yr. Ethnicity with Task				
	No Endorsement Sometimes Endorsement			
Non-Indians	8/ 15.4	37/ 71.2	7/ 13.5	
Indians	8/ 53.3	4/ 26.7	3/ 20.0	
$\chi^2 = 11.11$ Sig. @ .003 Gamma = -.38				



Appendix XXIV  
Chi Square Analyses  
for  
Protestant Ethic: Ethnicity with Age and Sex  
(See Table XII)  
Sig. @ .0002 - .05

Middle Males: 13 yr.		
	More Endorsement	Less Endorsement
Non-Indians	<u>32</u> / 47.8	<u>35</u> / 52.2
Indians	<u>10</u> / 76.9	<u>3</u> / 23.1
$\chi^2 = .26$	Sig. @ .05	Gamma = -.56

Younger Female: 12 yr. or Under		
	More Endorsement	Less Endorsement
Non-Indians	<u>21</u> / 19.6	<u>86</u> / 80.4
Indians	<u>12</u> / 70.6	<u>5</u> / 29.4
$\chi^2 = 16.98$	Sig. @ .0002	Gamma = -.81

Older Males: 14 yr. or More		
	More Endorsement	Less Endorsement
Non-Indians	<u>28</u> / 36.8	<u>48</u> / 63.2
Indians	<u>19</u> / 79.2	<u>5</u> / 20.8
$\chi^2 = 11.47$	Sig. @ .003	Gamma = -.73

Middle Females: 13 yr.		
	More Endorsement	Less Endorsement
Non-Indians	<u>23</u> / 43.4	<u>30</u> / 56.6
Indians	<u>10</u> / 71.4	<u>4</u> / 28.6
$\chi^2 = 2.46$	Sig. @ .05	Gamma = -.53

Older Females: 14 yr. or More		
	More Endorsement	Less Endorsement
Non-Indians	<u>13</u> / 25.0	<u>39</u> / 75.0
Indians	<u>23</u> / 65.7	<u>12</u> / 34.3
$\chi^2 = 12.68$	Sig. @ .001	Gamma = -.70

Appendix XXV  
Chi Square Analyses  
Family Orientation: Ethnicity with Age and Sex  
(See Table XII)  
Sig. @ .018 - .05

Younger Males: 12 yr. or Under			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>18</u> / 17.5	<u>22</u> / 21.4	<u>63</u> / 61.2
Indians	<u>6</u> / 50.0	<u>3</u> / 25.0	<u>3</u> / 25.0
$\chi^2 = 7.96$	Sig. @ .018	Gamma = -.60	

Younger Females: 12 yr. or Under			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>21</u> / 19.6	<u>27</u> / 25.2	<u>59</u> / 55.1
Indians	<u>8</u> / 47.1	<u>5</u> / 29.4	<u>4</u> / 23.5
$\chi^2 = 7.70$	Sig. @ .02	Gamma = -.53	

Middle Females: 13 yr.			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>15</u> / 28.3	<u>13</u> / 24.5	<u>25</u> / 47.2
Indians	<u>8</u> / 57.1	<u>4</u> / 28.6	<u>2</u> / 14.3
$\chi^2 = 5.72$	Sig. @ .05	Gamma = -.55	

Appendix XXVI  
Chi Square Analyses  
for  
Conformity to Classroom: Ethnicity with Age and Sex  
(See Table XII)  
Sig. @ .0007 - .001

Older Males: 14 yr. and Over			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>15</u> / 20.0	<u>26</u> / 34.7	<u>34</u> / 45.3
Indians	<u>13</u> / 56.5	<u>8</u> / 34.8	<u>2</u> / 8.7
$\chi^2 = 14.64$ Sig. @ .0007    Gamma = -.67			

Older Females: 14 yr. and Over			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>12</u> / 23.1	<u>21</u> / 40.4	<u>19</u> / 36.5
Indians	<u>22</u> / 62.9	<u>6</u> / 17.1	<u>7</u> / 20.0
$\chi^2 = 14.02$ Sig. @ .0009    Gamma = -.53			

Middle Females: 13 yr.			
	No		
	Endorsement	Sometimes	Endorsement
Non-Indians	<u>7</u> / 13.2	<u>21</u> / 39.6	<u>25</u> / 47.2
Indians	<u>8</u> / 57.1	<u>4</u> / 28.6	<u>2</u> / 14.3
$\chi^2 = 12.88$ Sig. @ .001    Gamma = -.69			

Appendix XXVII  
Chi Square Analyses: Study Groups I and II  
with Pupil Morale  
Sig. @ .0000

<u>Study Groups I and II with Teacher Morale</u>				
	<u>No</u>			
	<u>Endorsement</u>	<u>Sometimes</u>	<u>Endorsement</u>	
Study Group II	<u>68</u> / 20.4	<u>131</u> / 39.2	<u>135</u> / 40.4	
Study Group I	<u>123</u> / 39.4	<u>127</u> / 40.7	<u>62</u> / 19.9	
$\chi^2 = 42.25$ Sig. @ .0000    Gamma = -.40				

<u>Study Groups I and II with School Morale</u>				
	<u>No</u>			
	<u>Endorsement</u>	<u>Sometimes</u>	<u>Endorsement</u>	
Study Group II	<u>104</u> / 31.1	<u>84</u> / 25.1	<u>146</u> / 43.7	
Study Group I	<u>148</u> / 47.4	<u>79</u> / 25.3	<u>85</u> / 27.2	
$\chi^2 = 23.22$ Sig. @ .0000    Gamma = -.30				

Appendix XXVIII  
Chi Square Analyses: Study Groups I and II  
with Perceived Social Achievement  
Sig. @ .0007 - .005

Study Groups I and II with Self Expressive PSA		
No		
Endorsement	Sometimes	Endorsement
Study Group II <u>79</u> / 23.5	<u>227</u> / 67.6	<u>30</u> / 8.9
Study Group I <u>59</u> / 19.0	<u>198</u> / 63.7	<u>54</u> / 17.4
$\chi^2 = 10.78$		
Sig. @ .004 Gamma = .20		

Study Groups I and II with Self Perception PSA		
No		
Endorsement	Sometimes	Endorsement
Study Group II <u>85</u> / 25.3	<u>223</u> / 66.4	<u>28</u> / 8.3
Study Group I <u>47</u> / 15.1	<u>218</u> / 70.1	<u>46</u> / 14.8
$\chi^2 = 14.43$		
Sig. @ .0007 Gamma = .29		

Study Groups I and II with Learning-Others PSA		
No		
Endorsement	Sometimes	Endorsement
Study Group II <u>124</u> / 36.9	<u>147</u> / 43.8	<u>65</u> / 19.3
Study Group I <u>79</u> / 25.4	<u>153</u> / 49.2	<u>79</u> / 25.4
$\chi^2 = 10.50$		
Sig. @ .005 Gamma = .20		

Appendix XXIX-i

Chi-Square Analyses: Study Groups I and II  
with Teaching Dimensions of Learning Behavior

Sig. @ .0000 - .003

Study Groups I and II with Expressive TDLB

	Less		
	Endorsement	Sometimes	Endorsement
Study Group II	<u>86</u> /25.7	<u>107</u> /32.0	<u>141</u> /42.2
Study Group I	<u>134</u> /43.4	<u>96</u> /31.1	<u>79</u> /25.6
$\chi^2 = 27.61$			
Sig. @ .0000			
Gamma = -.33			

Study Groups I and II with Expressive-Liking-Task TDLB

	Less		
	Endorsement	Sometimes	Endorsement
Study Group II	<u>70</u> /21.0	<u>162</u> /48.5	<u>102</u> /30.5
Study Group I	<u>104</u> /33.7	<u>144</u> /46.6	<u>61</u> /19.7
$\chi^2 = 17.06$			
Sig. @ .0002			
Gamma = -.26			

Study Groups I and II with Expressive-Helping TDLB

	Less		
	Endorsement	Sometimes	Endorsement
Study Group II	<u>153</u> /45.8	<u>119</u> /35.6	<u>62</u> /18.6
Study Group I	<u>107</u> /34.6	<u>111</u> /35.9	<u>91</u> /29.4
$\chi^2 = 12.96$			
Sig. @ .001			
Gamma = -.22			

Study Groups I and II with Authority-Task TDLB

	Less		
	Endorsement	Sometimes	Endorsement
Study Group II	<u>82</u> /24.6	<u>210</u> /62.9	<u>42</u> /12.6
Study Group I	<u>66</u> /21.4	<u>173</u> /56.0	<u>70</u> /22.7
$\chi^2 = 11.34$			
Sig. @ .003			
Gamma = .18			



# Appendix XXIX-ii

Chi-Square Analyses: Study Groups I and II  
with Teaching Dimensions of Learning Behavior

Sig. @ .0000 - .0001

## Study Groups I and II with Teacher-Pupil-Interaction TDLB

	Less Endorsement	Sometimes	Endorsement
Study Group II	<u>102</u> /30.5	<u>177</u> /53.0	<u>55</u> /16.5
Study Group I	<u>89</u> /28.8	<u>127</u> /41.1	<u>93</u> /30.1
$\chi^2 = 17.92$ Sig. @ .0001 Gamma = .16			

## Study Groups I and II with Small Group TDLB

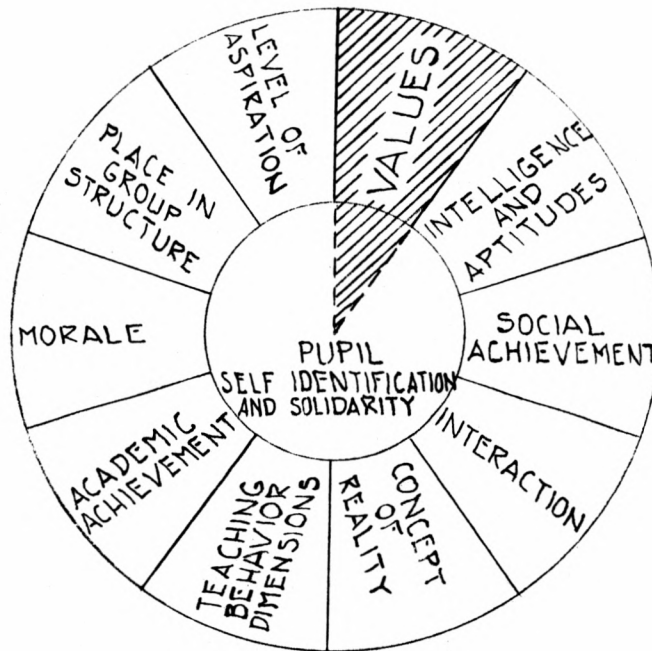
	Less Endorsement	Sometimes	Endorsement
Study Group II	<u>48</u> /14.4	<u>227</u> /68.0	<u>59</u> /17.7
Study Group I	<u>127</u> /41.1	<u>127</u> /41.1	<u>55</u> /17.8
$\chi^2 = 63.17$ Sig. @ .0000 Gamma = -.34			

## Part II

A Comparison of Value Preferences and Concepts of Indian Culture  
of Four Groups: Indian and non-Indian Pupils, Indian Parents,  
and Teachers of Indian Pupils

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## RECOMMENDATIONS AND IMPLICATIONS

### SECTION ONE: VALUE PREFERENCES COMPARED

The findings of the study seem to support the following categories of recommendations.

#### I. GENERAL RECOMMENDATIONS

- A. Expressed faith in human nature by Indians, both children and parents, reveals that mistrust of non-Indians is high. Unless this basic orientation is resolved, little will be accomplished on other more secondary levels.
- B. The Indian community possesses a much stronger appreciation for family solidarity than the non-Indian community; therefore efforts to educate Indian pupils need to develop along lines of liaison with the Indian family.
- C. Indian pupils consistently demonstrated an intense faith in the expectancies related to future possible economic advancement. Steps need to be taken to provide these pupils with opportunities for fulfillment of these optimisms in order to provide for the advancement of the next generation of Indian economy.
- D. Self-esteem ranks low among Indian people, both parents and children. It is recommended that programmes designed to provide information about native history and cultures be integrated into school programmes as a means of informing both Indians and non-Indians regarding the contribution such cultures make and will make to Canada's cultural development.

#### II. EDUCATIONAL RECOMMENDATIONS

- A. Integrated education, as distinguished from all-Indian schools, is recommended for Indian and for non-Indian pupils as well. Unless Indian schools per se can be operated with duly qualified Indian teachers, adequate facilities and materials, and acceptable academic standards which will prepare youngsters for future vocational or university careers, they are of little value. Information and understandings about Indian communities are an essential aspect of the educational menu of any child, Indian or non-Indian; therefore, integrated education, even in rural areas, which acquaints children with different cultural communities, seems to offer the best formula for both the Indian and the non-Indian child.
- B. On the basis of value-preferences noted in this study, teachers should be encouraged and required to take course work designed to acquaint them with Indian ways and values. They should be

made aware of the varying value-preferences of Indian and other pupils if they are to do an effective job.

- C. All educational planning, be it along integrated lines or other, should be in close cooperation with Indian parents and with established education committees on reserves. Value differences indicate that unless such is accomplished, serious misunderstandings can occur on the part of both parents and children regarding the nature and intent of the school programme and its relation to the Indian home and community.
- D. As much as is possible, cross-cultural variations and uniquenesses should be incorporated into the curriculum of the Indian and non-Indian child. This may mean the writing and development of new materials, but again, these should be accomplished with the cooperation of Indian informants.
- E. Value-preferences regard the basic ground of learning. Where differences exist between teacher expectations and pupil aspirations, for example, conflict occurs and learning is impeded. When parental concepts and teacher roles interfere, relations between learning in the home and the school are curbed. Finally, when pupil-parents' value-clashes occur, some indication of the role of education as an integrating force is obvious. This study has indicated that some of the basic value differences of these groups do exist. The implications for education, or the school as an institution, are clear. In seeking to develop an harmony of outlooks on life on the part of the student, a kind of "commonness of outlook" is desired for the school. Differences of value-orientation, therefore, need to be clarified in other forms than merely through scholarly research activities. Plans need to be set up for public forums, parent-teacher conferences and the like--in Indian communities--so that better, integrating education may result. This recommendation also carries implications regarding Indian and non-Indian parental meetings since both are involved in an integrated school situation. Values, as we have seen, are easily formed by children in the home and the school environment. Every possible effort must be made to see that "parts of the whole" are interrelated in order to avoid the harm and frustration which can occur. "The whole," in this case, includes the environment of the particular school community occupied by pupils, and implies that personnel involved therein, including non-Indian parents, be in some way helped to become an accepted part of the milieu.

### III. OTHER RECOMMENDATIONS

- A. The role of the non-Indian teacher in the all-Indian school poses a dilemma. Though it is a recognized fact that such schools will eventually disappear, in the meantime every precaution needs to be taken to bring in such teachers who have adequate training and understanding of the Indian pupil. Value-differences demon-

strated in this study indicate that serious problems can occur for Indian pupils if teachers are not highly qualified to handle Indian children. Foreign teachers therefore should not be hired until they have had time to acquaint themselves more fully with the Canadian way of life and with Indian cultures. Other teachers as well need to be appraised of the Indian situation before they are given teaching assignments. Ideally, a salary scale should be adopted which would appeal to better trained teachers for schools enrolling Indian children. Such teachers should be carefully screened before they are given assignments.

- B. The fact that in a number of value-areas pupils indicated preferences different from either their parents or teachers indicates something about teaching methodology. It is suggested that teaching for value-clarity might be a worthwhile pursuit for any classroom teachers as a means of permitting pupils the opportunity to clarify for themselves what they believe and why.\* Further, such a method gives pupils the opportunity to practice what they will have to do once they are adults--formulate for themselves life pursuits, ideas, and attitudes. Every teacher-training course designed for the integrated cultural situation needs to include such content. Unless this is done, there is nothing to stop a teacher from functioning in a traditional sense, paying little heed to what children think for themselves, and even damaging instead of aiding the pupils' educational development and experience.

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\*Louis B. Rath, et. al., Values and Teaching (Bobbs Merrill, 1967). This book is recommended in entirety for teachers functioning in integrated situations as a means of helping them develop an appropriate methodology. Included in the book are steps to be followed, a general theory, and studies intended to show the experiences of others who have experimented with it.



## SECTION TWO: CONCEPTS OF INDIAN CULTURE

## I. RECOMMENDATIONS

- A. Comparisons of Indian pupils attending integrated and non-integrated schools demonstrate that the school environment is a vital ingredient in influencing pupils' concepts regarding aspects of the Indian way of life. Further, more detailed probes would be desirable in order to identify the nature of that influence and, regarding recommendations, for its direction and/or amendment.
- B. Preferences by members of the four groups in the study indicate special attention to the idea of "speaking the Indian language" and respect for chiefs." Since no particular preference was designated for university involvement in the maintenance of the Indian languages, it is somewhat inconclusive what the future status of Indian languages is deemed to be or what the nature of transmission (possibly oral) of the native languages might be.
- C. Education is perceived by individuals, both Indian and non-Indian, as a stepping stone for the alleviation of specific Indian dilemmas. Although some disparity exists regarding the exact role of educators or the amount and nature of education to be received by Indians, its importance in the future destiny of Indian culture cannot easily be overestimated. It needs to be emphasized, however, that the lack of specificity regarding the role of education indicates an element of over-anticipation.
- D. It appears likely from the data that an integration of Indian people with non-Indians is preferable: this observation is deduced from the fact that the four groups of respondents expressed desirability for Indian children to be able to act and work with relative ease in both Indian and non-Indian worlds.
- E. Underlying the responses regarding the role of the university may be identified a concept of a "helping" institution toward the Indian people. Although the "ivory tower" viewpoint regarding the university may be thought to be quite typical, the data here suggest at least one variation of the role of the university.
- F. It needs to be underscored that on the basis of the responses tabulated in this section, concepts of the Indian situation emphasize consistently that the presence of particular patterns of Indian activity and behavior are a reality. An awareness of this kind constitutes a basic step toward knowing what course of action needs to be continued or commenced.



### SECTION THREE: AN EVALUATION OF A COURSE FOR TEACHERS IN INDIAN EDUCATION

This aspect of the Teacher Perception Study was intended, as stated, to be an attempt to assess and state meaningfully, the subjective appraisals of individuals to an exercise in intercultural education--a course for teachers in Indian education. The primary intention of the course was to provide an opportunity for collaboration with teachers in whose classrooms field work for the study would be carried on, and also to make available still another area in the experiments that would be investigated.

#### I. RECOMMENDATIONS

- A. It appears advisable to continue the course as a regular part of the University's offerings and to closely coordinate it with research efforts and field experiences. This is stated on the basis of the overall positive evaluation made of the course by students and on comments made by those involved in teaching in Indian educational situations because it affords them an opportunity for liaison with university personnel involved in research.
- B. Since the course provided ample beneficial opportunity for teachers from intercultural situations to compare and discuss mutual interests with each other, and since they stressed this in their reactions and appraisals, the course should be designed with sufficient opportunity for such to occur. These activities were, according to most of the teachers' estimation, the highlight of the course. It would not be unreasonable to recommend that this course constitute a part of the orientation for would-be teachers of Indian children.
- C. Since the ratings the course received were positive for the most part, it might be advisable in the future to consider also the use of additional, more "objective" type measures to perform a course evaluation. Such should be employed on both a pre-test and post-test basis.
- D. It seems appropriate to consider in future planning the use of fewer lecturers in the course, for by relying on only specific personnel the continuity between sessions would be better maintained and, as the evaluations indicate, fluctuations between session evaluations might also be eliminated.
- E. Another design to measure the influence of this course is reported in Section One of this study. It attempts to determine, for example, the differences between the value-orientations of control and experimental teachers and to measure to some extent their influence in their classes. This needs to be further investigated.

The study of values is becoming increasingly important in the area of cross-cultural studies, for values represent the very basis of cultural differences. A survey of studies indicates the difficulties and complexities of accurately seeking to investigate the value-bases of particular groups, and of the varying approaches to this field of investigation. In order to provide a frame of reference for the consideration of value-differences among groups included in this study, it is necessary to outline briefly the research background of value-study and to seek to indicate its relevance to the purpose of this project.

#### THEORETICAL CONSIDERATIONS

##### Theoretical Background for Value Studies

Many research studies grow out of concern for social malfunctions and discrepancies; with regard to cross-cultural studies this is especially the case. In the United States, it is necessary only to glance at current efforts in the social sciences to realize that the larger cities, so much the centre of unrest and misunderstanding, are the headquarters for such pursuits as the study of value-differences. Education for the disadvantaged child, as the programs have come to be known, involve the identification of the needs and characteristics of

children delineated to be such, and of sound action-oriented programs designed to create for these children better opportunities to inculcate and develop the skills and understandings needed to improve upon their potential situation.

The study of value-preferences or value-orientations is one of the areas of research knowledge capable of furnishing the researcher with data basic to understanding the child who is to be aided in cultural adjustment. A definition of values is available from many sources, including the dictionary, but the idea that they may be classified as "any characteristic deemed important because of psychological, moral or aesthetic considerations" might be appropriate here. Talcott Parsons, noted sociologist, has defined values as "the generalized principles from which more specific rules and evaluations can be derived."<sup>1</sup> In similar vein, Louis E. Rath describes values more generally:

"Persons have experiences; they grow and learn. Out of experiences may come certain guides to behavior. These guides tend to give direction to life and may be called values. . . . Values show what we tend to do with our limited time and energy."<sup>2</sup>

Raths' discussion is further helpful in his outline of the forms in which values may be detected. The process of valuing, usually not conceived of in such complex terms, is outlined by Rath as comprising several aspects: choosing freely, choosing among alternatives, choosing after thoughtful consideration of the consequences of each alternative, prizing and cherishing, affirming, acting upon choices, and repetition.<sup>3</sup> This breakdown gives some indication as to the difficulty of developing values and, furthermore, of the careful research required for a correct identification of values.

Values may be difficult to define, but they are even more difficult to categorize in terms of a distinct group. Here again Rath's theory is of assistance, for instead of emphasizing value differences as the major objective of inquiry, Rath discusses a selection of "value indicators," that is, a list of the kinds of actions or orientations exhibited by individuals which indicate or give some kind of clue as to their basic frame of values. The list includes the following:

1. Purposes which give direction to life.
2. Aspirations we hope to accomplish today or tomorrow in the future.
3. Attitudes toward or against something.
4. Interests of various kinds.
5. Feelings, or statements expressing how we feel.
6. Beliefs and convictions.
7. Activities, things people not only talk about but do.
8. Worries, problems and obstacles.<sup>4</sup>

Williams offers a similar list of procedures or techniques which can be employed for identifying individual value-preferences:

1. Observation of the directions of interests.
2. Focusing directly on what people say their values are.
3. Observation of the reward-punishment system of a group or society noticing what behavior is rewarded and praised, censored or punished.<sup>5</sup>

Though it may be established that the actual identification of value-orientations is not easily accomplished, the above guidelines are of aid in the selection or construction of an instrument intended for such. Also to be considered are the areas of life to be investigated for a determination of basic values. The suggestions in this regard can be obtained from many different sources although the similarity of suggestions is sufficient enough to indicate a basic agreement. Lowry W. Harding, in a study dealing with the construction of an appropriate questionnaire, delineates five basic areas to be probed.

1. Conceptions of the nature of the desirable social organization.
2. Conceptions of the nature of final causation.
3. Conceptions of the place and function of the individual in society.
4. Conceptions of the desirability of social transition.
5. Conceptions of the nature of the learning process.<sup>6</sup>

Harry S. Broudy, philosopher, offers a breakdown of seven basic areas of value-experiences which he postulates cover the Western value-system.

These are: (1) economic, (2) health, bodily and recreational, (3) social, (4) moral, (5) aesthetic, (6) intellectual, and (7) religious.<sup>7</sup>

And Williams, in his sociological delineation of value areas, selected fifteen major value areas which are intended to cover the gambit of American society. The list includes: achievement and success, activity and work, moral orientation, humanitarian mores, efficiency and practicality, progress, material comfort, equality, freedom, external conformity, science and secular rationality, nationalism-patriotism, democracy, individual personality, and racism and group superior themes.<sup>8</sup>

A number of significant value studies have been accomplished recently which indicate differences even between groups where previously such would not have been postulated. One of the best-known studies was completed by Kluckhohn and Strodtbeck<sup>9</sup> in the American Southwest, indicating marked cultural distinctions between four of five communities studied. The communities could be identified as Mormon, Spanish-American, a farming village of Texans, Navahoes, and Pueblo Indian. The study was developed over a five year period, and became the model for many similar efforts both in the United States and Canada. H.W. Kitchen conducted a study in Newfoundland among grade nine pupils comparing

their value-orientations with those of their contacts.<sup>10</sup> He found several specific kinds of values held by pupils and adults in various parts of the province (the sample included 2,151 pupils from 250 communities). Pupils indicated that their values were changing from those of a typical peasant society to those of a modern urban society, even to those dominant in larger centres of Canada.

Robert S. Parry also utilized the Kluckhohn model to test the hypothesis that an adolescent subculture exists and can be described.<sup>11</sup> His sample included a group of grade ten students from Calgary, Alberta whose value-orientations were compared with fathers of the students. Among the conclusions was the observation that students tend to be traditional rather than emergent in their acceptance of Individualism, and Parry suggested that this indicated that contemporary class arrangements and methodologies in the school should be modified to allow for more individuality and group interaction. Implications for local school counselling programs were also made.

Lowry Harding concludes his studies of the value-problemmaire by stating that values develop in terms of philosophical and social concepts and are organized into personal value-systems which function psychologically in directing behavior, and that these may be identified through research.<sup>12</sup> The selection of problems as ingredients of a questionnaire is a feasible approach, and the selection of value-areas, setting up categories, and identifying the meaning of the value-statements may statistically be validated as an effective process in value study.<sup>13</sup>

Studies of value-orientations are sufficient in number to indicate



that some of the current research efforts have a backlog of theory to rely on for procedures and even conclusions. A few observations need to be made regarding the relevance of value study for the present research project and the possible theoretical and practical implications.

### Relating Value Study to Education

The study of values is important for considering the role of the school in society and for the determination of a personal philosophy of education. However, there are other important functions of this task that have to do with intercultural relationships, especially in integrated situations. The former tasks carry with them the connotation of locating and teaching the validity of certain values; the latter is more in line with the concept of identifying value differences as a means of furnishing better understandings and, hence, more effective education. In a general way Spindler has described this activity as:

. . . many conflicts between parents and teachers, school boards and educators, parents and children, and between the various personages, and groups, within the school system (teachers against teachers, administrators against administrators and so on) can be understood as conflicts that grow out of sharp differences in values that mirror social and cultural transformation of tremendous scope - and for which none of the actors in the situation can be held personally accountable. . . .<sup>14</sup>

When pupils of a distinct subcultural orientation attend schools which closely resemble the ongoing value-schemes of contemporary society, conflicts along the line of dilemmas described by Spindler indeed become a reality. This makes explicit the need to explore and identify value differences which make for conflict situations in the school context, not only as they derive from value-orientations held by various pupils, but

as well by teachers.

Schools are notoriously adept at teaching values, frequently not as overtly as might be expected, but by subtle yet effective means. It has been stated that one of the major functions of the school is to transmit culture.<sup>15</sup> If transmission of certain values does occur in the school it would be well to be aware which ones these are and to examine whether or not it is desirable to transfer them all, and whether in the transmission, conflict might not occur with value-systems represented in the school by various groups. Value-clarification, then, is desirable. In a pluralistic society like Canada many influences play on political and social decisions made by governmental parties in power; traditions, formal and informal structures, and other practical considerations. An awareness of value-systems as they relate to issues which require careful decision-making can greatly assist in strengthening the nature of choices and assure decision-makers of more satisfactory and valid resolutions. To this end the clarification and elaboration of varying value-orientations comprises a very valuable contribution to intercultural research.

One of the contemporary distinctive features of the school has been the concept of the "community in school" which envisaged the school as a miniature community, a place where the learning experiences of youth would continually be related to life.<sup>16</sup> Although largely an American phenomenon, which argued that the school is to be a mixture of differing races, religions, and social classes, this concept has some relevance for the Canadian situation. It may be true that the sanguine hopes of educators toward such a school set-up were not entirely realistic for

in America a number of such schools have not really offered opportunities for full participation by all students. The reasons may have been that too deeply entrenched social attitudes and concomitant practices which precluded the realization of this ideal were either improperly diagnosed or, when diagnosed correctly, attacked with inappropriate strategy and insufficient resources.<sup>17</sup> In Canada there has been less of a tendency on the part of educators and administrators to transform the school into a miniature nation of identical and common values, beliefs and customs. Rather, the pluralistic orientation has been honoured with the resultant school comprising a mixture of such entities as values and beliefs present, often without much allowance for clarifying and seeking to understand differences and benefiting through them. A study, such as the present one, emphasizing a clarification of value-preferences, can assist a great deal in pointing out what such phenomena are in basic form and in elaborating on some of the factors responsible for them.

The concept of "assimilation" holds a fear for many educators and legislators alike in relation to the cultures and subcultures of Canada. The only viable alternative seems to be the current "salad-bowl" society which Canada seems to be. A paradigm developed by Milton M. Gordon appears to be helpful here, because he illustrates how the process of assimilation can actually occur in a variety of categories or stages. By identifying at which stage our own intercultural situation may be, and by selecting with care which we may desire to develop toward in terms of the interests of groups involved, a great deal of frustration may be avoided. Gordon's schematic is as follows:

<u>Subprocess or Condition</u>	<u>Type of Stage of Assimilation</u>
Change of cultural patterns to those of host society	Cultural or behavior assimilation
Large-scale entrance into cliques; clubs and institutions of host society, on the primary group level	Structural assimilation
Large-scale intermarriage	Marital assimilation
Development of sense of people-hood bases exclusively on host society	Identificational assimilation
Absence of prejudice	Attitudinal receptional assimilation
Absence of discrimination	Behavioral receptional assimilation
Absence of value and power conflict	Civic assimilation <sup>18</sup>

Theoretically, at least, Gordon's tabulation is of some help in delineating the situation in which Canadian educators and administrators find themselves. It appears evident that in several of the conditions relating to assimilation some basic adjustments need to be made, and a beginning stage of clarification is attempted in the report of a study dealing with value-orientations of several groups in a cross-cultural educational setting. The findings indicate a close relationship to the theoretical concepts treated here, and, in conjunction with them, some recommendations are set forth for the purpose of alleviating present disadvantageous conditions.

## PRACTICAL CONSIDERATIONS

### Nature of the Study

The basic intent of the research is to determine what differences exist among the groups studied and to determine possible reasons for them. This part of the study is divided into three sections.

Section One, on the basis of an instrument designed to identify value-preferences, compares the results obtained from four groups: Indian and non-Indian pupils, Indian pupils in integrated and non-integrated learning situations, teachers involved in the study, and Blackfoot Indian pupils and their teachers. Comparisons of value-preferences are made in Section One between the following sets of groups:

1. Indian and non-Indian pupils in the Calgary rural area.
2. Indian children in integrated schools and Indian children in all-Indian schools.
3. Blackfoot Indian pupils and their parents.
4. Blackfoot integrated Indian pupils and their parents.
5. Non-integrated Blackfoot pupils and their parents.
6. Teachers involved in this study and other teachers also in Indian education.
7. Blackfoot Indian pupils and their teachers.

Section Two deals with concepts of Indian culture which four groups of people hold: Indian pupils, non-Indian pupils, Indian parents, and teachers in Indian education. It is designed to be an exploratory part of the basic study and probes areas such as Indian customs, Indian leadership and Indian education.

Section Three is a report of reactions to various relevant phenomena of two groups of teachers involved in the "Course for Teachers in Indian Education" conducted at the University of Calgary during the 1968-69 and 1969-70 school terms.

Schools included in the study were: integrated schools; Standard, Carseland, Exshaw, Springbank, Gleichen and Fairview (Calgary), and

all-Indian schools; Morley and Crowfoot school, the latter at Cluny, Alberta.

The sample included 110 Indian children from both integrated and non-integrated schools, and 447 non-Indian children. It was intended that pupils be sampled at the junior high school level, but in order to raise the number of the sample to a significant amount, it became essential to include pupils from grades five and six as well. Questionnaires focusing on value-preferences as well as an auxiliary form dealing with concepts of Indian culture were administered, in most cases, by teachers of the classes involved. On one occasion, one of the researchers administered a series of questionnaires to one group of students. The opportunity afforded a firsthand experience related to the difficulty and length of time involved for testing. Since the Indian students involved were from two Indian reservations, their origin is identifiable as Blackfoot and Stony (Bears paw, Chinequay and Wesley).

The scope of the study was limited in some respects due to the large area covered in schools and because of the many facets of Indian education that were to be probed. In an attempt to compare pupil and parent value-preferences, an Indian person was contacted to administer tests to parents. These interviews were forty in number and were limited to one Indian reservation--the Blackfoot. Comparisons between pupils and parents then, were made only between Blackfoot children and parents.

Comparisons between pupils and teachers again involved Blackfoot pupils in order that these findings could be compared with the same pupils and their parents. Since the study involved both experimental and "control" teachers, it was necessary to identify a sufficient number of



the latter and obtain their consensus to participate in the study. In most cases, these teachers completed the questionnaire via mail after having been contacted by letter. In all, thirteen "experimental" teachers and twelve "control" teachers participated in the study. The former were those individuals who took part in the "Class for Teachers in Indian Education" (reported in Section Three of Part II of this research) as well as in the other related activities of this portion of the study. It should be mentioned that the "control" teachers were not obtained from a random sample. However, since the total population of such teachers is not numerous, the actual "control" group of pupils represents a significant number of them.

The intent of making comparisons between the various groups was as follows:

First, differences between value-preferences of Indian and non-Indian children might be interpreted as indicative of successful socialization. This would be quite in keeping with knowledge obtained by social scientists about value-realization within a culture at fairly early ages.

Second, particular value emphasis, that is, differences of significance of certain categories of the scale, would serve to demonstrate wherein cultural differences in value-preferences occur. It has frequently been posited, for example, that Indian people have a closer family solidarity, sense of brotherhood and fairness, etc. This research may shed some light on these kinds of statements.

Third, differences between Indian children attending integrated schools and those attending all-Indian schools might indicate to some

extent the value influence of the integrated school on Indian children.

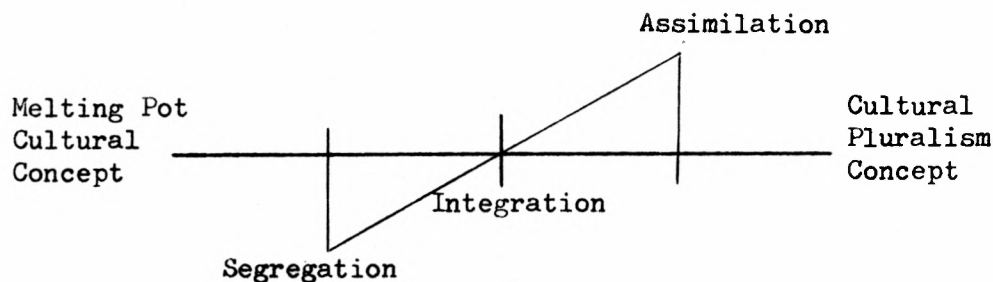
Fourth, comparisons, in line with the above probe, would consist of comparing results of testing of integrated and non-integrated Indian pupils with their parents, again to demonstrate the influence of the integrated school regarding Indian pupil value orientations.

Fifth, comparisons made between Blackfoot Indian children, their teachers, and their parents could serve as a means of determining the kinds of values these children hold: "Are these more like those of their teachers or those of their parents?" Although significant implications could result from this study, their implementation cannot necessarily be determined by the researchers. Rather, implementations become the responsibility of policy makers in education. Several questions become explicit:

- i) If indeed it can be proven that Indian children are being influenced more by the integrated school situation than the non-integrated, and more influenced by their teachers than parents, what implication has this for the maintenance of Indian culture?
- ii) If value orientations, usually considered basic to any culture or subculture, change, how much longer will it be before the basic culture as such will vanish?
- iii) On the other hand, if one has in mind the advantageous understandings that may be inculcated through cultural exchange, what implications have these influences in terms of better life adjustment for Indian children?

Though these questions represent positions on an end of a continuum of a cultural pluralism versus melting pot paradigm, there may be ample room for considerable variation within the two poles.

Figure I



It can be seen that the three questions fall in the centre of the paradigm, at the level of integration. In some situations, either a segregated or assimilated approach might be considered to have merit as correctional devices for apartheid social disruptions which may have occurred; however in the present trends of Canadian policy with regard to native pupils, the integrated approach seems to be the point of balance needed. It is a goal of this research to see if integrated value preferences are being endorsed by those involved with the education of the native child.

The second section of Part II deals with ideas regarding the Indian way of life. Basically the same groups of people were used as the sample population studied; however Indian parents were added to the sample. A few general questions attached to the major instrument at the time it was administered provided information regarding the Indian way of life. Specific items to assess this concept were twelve in number, and pertained to the following areas of Indian life: Indian activities, leadership and education. The latter topic especially, was intended to supplement the basic intent.

When comparisons are made between different groups of people regarding the Indian situation and the role of Indian people today, the results may become valuable in terms of planning or implementing activities for better cultural understandings and/or the elimination of false concepts of Indian wants, aspirations, and enjoyments. There is considerable evidence, both formal and informal, to indicate that the situation of the Indian is misunderstood and that concepts of Indian aspirations vary a great deal from one person to another. This aspect of the research sought for some specifics in these regards.

The third section presents the views of teachers involved in the study on the basis of weekly reaction reports presented by them to the researchers. Reactions include such topics as Indian education, concepts about learning by Indian children, and the role of the university regarding the field of Indian education. These reactions serve to supplement the findings of Sections One and Two.

#### SECTION ONE: VALUE-PREFERENCES COMPARED

##### The Instrument

The instrument utilized in this research is one devised and effectively employed by Audrey James Schwartz in a study conducted in 1967, and entitled, "Affectivity Orientations and Academic Achievement of Mexican-American Youth".<sup>19</sup> The study sought to explore four basic aspects of a value situation in a Mexican-American community in southwest United States: (1) the ways and to what extent Mexican-Americans and Anglo pupils differ from one another in affectivity orientations and in

academic success; (2) the ways and to what extent Mexican-Americans differ internally from one another in affectivity orientations and in academic success; (3) to what extent general theories of the relationship between affectivity orientations and achievement are applicable to the educational context and which affectivity variables are most important to academic success; and (4) if affectivity orientation variables differ in their effect upon academic achievement can these differences be explained in light of existing sociological theory?<sup>20</sup> Although the hypotheses in the present study differ from those stipulated by Schwartz, the intercultural situation explored in both cases led to the serious consideration of usage of the tests employed by Schwartz.

Conditions in the Mexican-American communities of southwest United States are, in many ways, similar to those in Indian communities in Western Canada. The low rate of formal education received by Mexican-Americans, the high drop-out rate of those who do attend school, severe economic conditions and the like attest to the plight of these people. Even when assimilation takes place with the larger community, problems of Mexican-Americans do not diminish--again, a situation quite parallel to that of the Canadian Indian people.

As a basis to understanding and making recommendations for the alleviation of conditions suffered by the Canadian Indian, study of affectivity orientations, or value-preferences such as those of the present study, can yield valuable evidence regarding one's world-view and general orientation to one's own native community and to that of the non-Indian community, a community which many Indian people will be forced to explore through economic conditions for the purposes of livelihood.

The procurement of knowledge about value preferences is dependent on the reliability with which one can distinguish what value-preferences are. While a definition of the basic term "value" might be sufficient as "any characteristic deemed important because of psychological, social, moral or aesthetic considerations", the task still remains of determining just how values, or better, value-preferences (a more relative kind of delineation) can be identified and properly categorized.

Basic to the study and investigation of the value area of human situations has been the pioneering work of Florence R. Kluckhohn and Fred L. Strodtbeck, Variations in Value Orientations.<sup>21</sup> These authors delineate basic assumptions usually not explicitly made by researchers when value studies are undertaken. The first assumption, and one which is certainly the backbone of the present study, indicates that there are variations in culture maps and that these can somehow be meaningfully classified. The second assumption is that it may be possible to formulate a set of problems (as in the case of a questionnaire) which makes it possible for comparisons between two or more cultures. The problems or situations posed would need to be understood and in keeping with the context of the cultures researched. The third assumption, relating still to the form of instrument employed, is that the alternatives posed to the sets of problems would be realistic within the framework of the cultures studied.<sup>22</sup>

In the Kluckhohn research, the value scale employed consisted of a set of rather lengthy problems unique to the locale of the study. The areas which the study attempted to measure included the following:<sup>23</sup>



1. What is the character of innate human nature? (Human nature orientation).
2. What is the relation of man to nature and supernature? (Man-nature orientation).
3. What is the temporal focus of human life? (Time orientation).
4. What is the modality of human activity? (Activity orientation).
5. What is the modality of man's relationship to other men? (Relational orientation).

In the Kluckhohn scale, the above categorizations were put into the form of several questions with alternatives, for example regarding human nature orientation--in terms of Evil, Good-and-Evil, and Good. Other categories are similarly devised for the various items.

Serious consideration was given in the present study to utilization of the Kluckhohn instrument, but the idea was rejected for several reasons. This decision was in part influenced by a significant study conducted by Dr. Leslie Gue of the University of Alberta, using the Kluckhohn scale.<sup>24</sup> Dr. Gue made minor changes in several of the items in the Kluckhohn scale in order to make it more appropriate to the situation in Northern Alberta. The attempt, apparently, was quite successful in terms of the appropriateness of the instrument and in relating its set of problems to Northern Alberta communities. In addition to amending several of the Kluckhohn items, however, Dr. Gue felt it necessary to add a few original items designed to get at some phenomena not specifically provided for in the Kluckhohn scale. The topic of education, notably, is not really dealt with in the Kluckhohn model, but the Gue alternations made up for this lack. It was precisely for this reason, because education was a basic thrust of the present study, that the Kluckhohn model was rejected. Rather, a search was made to locate a scale that could be

used to get at basic value-preferences which would include some liberal reference to the school situation.

One other aspect of the Kluckhohn model should be mentioned. Because of its thorough attempt to get at problems fundamental to the function of a community as a means of obtaining value-orientations, the length of the instrument itself, in terms of utilization, makes it almost impossible to use in the average school setting. The present research, geared as it was to the classroom situation, demanded that work expected of pupils be limited to the length of the class hour, in this case, usually forty-five minutes. The Kluckhohn model, when used by children, required nearly an hour and a half to execute. Again, although philosophically as thorough a piece of work as could be obtained anywhere, it was felt that a different scale should be located; one which would incorporate more references to the educational context, and one which would be briefer for pupils to complete.

The scale devised by Schwartz contains forty items, thirteen of which pertain directly to the school situation as well as others which relate to the family and to peer relations. The latter two items are interrelated with the concept of learning. The scale employed in the Schwartz study was utilized in the present research with only minor changes. Since the questionnaire was administered to teachers, parents and pupils, and as the wording is primarily addressed to pupils, it was necessary to change the wording slightly in each case to refer to the situation of the children. The second part of the instrument, designed to gain concepts of the Indian way of life from the various respondents, was left the same, mainly because of the narrative nature of the instrument.

The areas of value-orientations probed by the Schwartz instrument comprise the following:

	<u>Number of Items</u>
1. Faith in human nature	3
2. Formal school compliance	3
3. Futuristic orientation	3
4. Independence from peers	4
5. Instrumental orientation scale	3
6. Orientation to family authority scale	4
7. Occupational values: reward orientation scale	4
8. Occupational values: social orientation scale	2
9. Expressive orientation scale	4
10. Index of autonomy	3
11. Index of idealized school goals	3
12. Index of self-esteem	<u>4</u>

Total = 40 items

In order to provide a standardized kind of response tabulation, the questionnaires were designed with three possible alternatives, strongly agree, slightly agree, and disagree. It was thought to provide no more than three such categories since youngsters in the grades involved would likely find it easier to tabulate these. For purposes of validation the response choices were left the same for student, teacher, and parent forms of the questionnaire.

#### Interpretation of Data

This part of the research study deals with three basic comparisons of value-preferences involving four groups of people: Indian children, their parents, teachers of Indian children, and non-Indian children. Seven comparisons are made in all, several of them secondary in relation to the three basic tabulations. These are as follows:

1. Comparison of value-preferences of Indian and non-Indian children.
  - A. Comparison of integrated and non-integrated Indian children.
2. Comparison of Blackfoot Indian pupils and their parents.
  - A. Comparison of integrated Blackfoot Indian pupils and parents
  - B. Comparison of non-integrated Blackfoot Indian pupils and parents
3. Comparison of Blackfoot Indian children and their teachers
  - A. Comparison of control and experimental teachers

The interpretation of the data will be according to the three major groupings listed above.

#### Indian and Non-Indian Pupils

Table I contains the statistical breakdown of responses in numerical as well as percentage terms; Chi-square and Gamma significances as well are recorded. The tables are designed along the lines of the twelve value categories utilized, and the following summary indicates the results according to the number of items in each table with at least a .05 level of Chi-square significance. These are placed in the column over the total number of items in the value category. Gamma figures are occasionally referred to as well.

Table I  
Value Preferences of Indian and  
Non-Indian Pupils

		Agree		Slightly Agree		Disagree		Chi-Square*
		No.	%	No.	%	No.	%	Gamma
FAITH IN HUMAN NATURE	1. Non-Indian	187	41.8	231	51.7	29	6.5	0.0131
	Indian	31	28.2	74	67.3	5	4.5	.2189
	2. Non-Indian	57	12.8	159	35.6	231	51.7	0.0000
	Indian	50	45.5	37	33.6	23	20.9	-.5970
	3. Non-Indian	14	3.1	96	21.5	337	75.4	0.0000
	Indian	19	17.3	52	47.3	39	35.5	-.6738
FORMAL SCHOOL COMPLIANCE	4. Non-Indian	112	25.1	191	42.7	144	32.2	0.0000
	Indian	54	49.1	26	23.6	30	27.3	-.2906
	5. Non-Indian	305	68.2	81	18.1	61	13.6	0.2652
	Indian	67	60.9	22	20.0	21	19.1	.1543
	6. Non-Indian	29	6.5	72	16.1	346	77.4	0.0709
	Indian	7	6.4	28	25.5	75	68.2	-.2013
FUTURISTIC ORIENTATION SCALE	7. Non-Indian	152	34.0	203	45.4	92	20.6	0.0261
	Indian	47	42.7	52	47.3	11	10.0	-.2246
	8. Non-Indian	79	17.7	201	45.1	166	37.2	0.0000
	Indian	45	40.9	46	41.8	19	17.3	-.4591
	9. Non-Indian	139	31.2	137	30.7	170	38.1	0.0168
	Indian	41	37.3	43	39.1	26	23.6	-.2041
INDEPENDENCE FROM PEERS	10. Non-Indian	22	4.9	85	19.1	339	76.0	0.0000
	Indian	17	15.5	35	31.8	58	52.7	-.4644
	11. Non-Indian	229	51.3	171	38.3	46	10.3	0.5403
	Indian	50	45.5	47	42.7	13	11.8	.1018
	12. Non-Indian	82	18.4	225	50.4	139	31.2	0.0236
	Indian	33	30.0	50	45.5	27	24.5	-.2097
	13. Non-Indian	68	15.2	161	36.1	217	48.7	0.0000
	Indian	41	37.3	42	38.2	27	24.5	-.4628

\*Upper figure in each row signifies Chi-Square value; lower figure signifies gamma.

Table I (continued)

			Agree		Slightly Agree		Disagree		Chi-Square Gamma
			No.	%	No.	%	No.	%	
INSTRUMENTAL ORIENTATION SCALE	14.	Non-Indian	48	10.8	32	7.2	366	82.1	0.0003
		Indian	28	25.5	6	5.5	76	69.1	-.3538
	15.	Non-Indian	363	81.4	60	13.5	23	5.2	0.3675
		Indian	83	75.5	19	17.3	8	7.3	.1678
	16.	Non-Indian	18	4.0	32	7.2	396	88.8	0.0000
		Indian	18	16.4	13	11.8	79	71.8	-.5088
ORIENTATION TO FAMILY AUTHORITY SCALE	17.	Non-Indian	231	51.9	161	36.2	53	11.9	0.9877
		Indian	58	52.7	39	35.5	13	11.8	-.0131
	18.	Non-Indian	115	25.8	264	59.2	67	15.0	0.0000
		Indian	32	29.1	38	34.5	40	36.4	.1957
	19.	Non-Indian	102	22.9	229	51.3	115	25.8	0.0028
		Indian	38	34.5	37	33.6	35	31.8	-.0602
OCCUPATIONAL VALUES: REWARD ORIENTATION SCALE	20.	Non-Indian	193	43.3	195	43.7	58	13.0	0.0000
		Indian	90	81.8	17	15.5	3	2.7	-.6848
	21.	Non-Indian	73	16.4	202	45.3	171	38.3	0.0000
		Indian	54	49.1	42	38.2	14	12.7	-.5960
	22.	Non-Indian	65	14.6	195	43.7	186	41.7	0.0000
		Indian	44	40.0	46	41.8	20	18.2	-.5112
OCCUPATIONAL VALUES: SOCIAL ORIENTATION SCALE	23.	Non-Indian	112	25.1	246	55.2	88	19.7	0.0000
		Indian	54	49.1	47	42.7	9	8.2	-.4464
	24.	Non-Indian	282	63.2	121	27.1	43	9.6	0.0001
		Indian	93	84.5	14	12.7	3	2.7	-.5091
	25.	Non-Indian	213	47.8	179	40.1	54	12.1	0.4723
		Indian	57	51.8	44	40.0	9	8.2	-.0965
	26.	Non-Indian	307	68.8	109	24.4	30	6.7	0.8363
		Indian	75	68.2	29	26.4	6	5.5	0.0046
	27.	Non-Indian	17	3.8	163	36.5	266	59.6	0.0000
		Indian	24	21.8	48	43.6	38	34.5	-.5016



Table I (continued)

		Agree		Slightly Agree		Disagree		Chi-Square Gamma
		No.	%	No.	%	No.	%	
EXPRESSIVE ORIENTATION SCALE	28. Non-Indian	204	45.7	204	45.7	38	8.5	0.1452
	Indian	59	53.6	39	35.5	12	10.9	-.1016
	29. Non-Indian	205	46.0	187	41.9	54	12.1	0.2732
	Indian	59	53.6	42	38.2	9	8.2	-.1519
	30. Non-Indian	326	73.1	96	21.5	24	5.4	0.6322
	Indian	79	71.8	27	24.5	4	3.6	.0176
INDEX OF AUTONOMY	31. Non-Indian	59	13.2	185	41.5	202	45.3	0.0650
	Indian	22	20.0	50	45.5	38	34.5	-.2073
	32. Non-Indian	69	15.5	167	37.4	210	47.1	0.4920
	Indian	18	16.4	47	42.7	45	40.9	-.0915
	33. Non-Indian	238	53.4	164	36.8	44	9.9	0.0000
	Indian	28	25.5	51	46.4	31	28.2	.5061
INDEX OF IDEALIZED SCHOOL GOALS	34. Non-Indian	321	72.0	105	23.5	20	4.5	0.1000
	Indian	80	72.7	20	18.2	10	9.1	.0133
	35. Non-Indian	322	72.2	102	22.9	22	4.9	0.3400
	Indian	87	79.1	19	17.3	4	3.6	-.1783
	36. Non-Indian	341	76.5	91	20.4	14	3.1	0.0775
	Indian	95	86.4	13	11.8	2	1.8	-.3145
INDEX OF SELF-ESTEEM	37. Non-Indian	230	51.6	176	39.5	40	9.0	0.0089
	Indian	40	36.4	53	48.2	17	15.5	.2791
	38. Non-Indian	51	11.4	103	23.1	292	65.5	0.0000
	Indian	30	27.3	37	33.6	43	39.1	-.4539
	39. Non-Indian	247	55.4	164	36.8	35	7.8	0.5525
	Indian	57	52.3	40	36.7	12	11.0	.0751
	40. Non-Indian	220	49.3	180	40.4	46	10.3	0.0532
	Indian	67	61.5	36	33.0	6	5.5	-.2389

N: Indians = 110  
Non-Indians = 447

<u>Value Category</u>	<u>Number of Items with Significance</u>
Faith in Human Nature	3/3
Formal School Compliance	1/3
Futuristic Orientation Scale	3/3
Independence from Peers	3/4
Instrumental Orientation Scale	2/3
Orientation to Family Authority Scale	3/4
Occupational Values: Reward Orientation Scale	4/4
Occupational Values: Social Orientation Scale	0/2
Expressive Orientation Scale	1/4
Index of Autonomy	1/3
Index of Idealized School Goals	0/3
Index of Self-Esteem	3/4

Seven of the twelve categories indicate at least one-half of the items in each category with a significant difference in values between the two groups. Utilizing these seven categories as relevant to the study the following differences become noticeable:

1. Indian children demonstrated less faith in human nature than did non-Indian children.
2. Indian children indicated significantly less interest than non-Indian children in futuristic planning and expectations.
3. Indian pupils demonstrated a greater degree of independence from peers than did their non-Indian counterparts.
4. Indian students indicated less faith in education as instrumental to later success than non-Indian students.
5. Indian children held more to family authority than non-Indians.
6. Indian pupils indicated a strong faith in occupational rewards as opposed to non-Indians.
7. Indian pupils exhibited significantly less self-esteem than non-Indian pupils.

The above observations can to a great extent be substantiated in other research regarding the Indian situation as expressed via Indian

values. Berger, for example, in drawing together salient value-preferences of the AmerIndian, notes:

He probably doesn't trust middle class Yankees, he has low aspirations, he is probably ready to follow a tradition of cooperativeness and mutual aid (within his own group, not necessarily with the school system), and he is probably mature and self-reliant.<sup>25</sup>

These descriptions substantiate what has been identified in this study as the value-preferences of Indian people.

It does not take a great deal of imagination to delineate the kind of environment the average school situation must furnish for the Indian child; certainly lower self-esteem and firmer family solidarity tend to be featured which do not foster an expedition of normal school objectives. Wolcott, for example, notes that Kwakiutl children attended school reluctantly and ritually. Though they did frequent the school, their participation was analagous to travelling on someone else's boat; one gets on, sits patiently during the long slow ride, and eventually gets off. Age sixteen is the destination of the educational journey.<sup>26</sup>

These observations indicate the need for a transformation and re-vamping of the present educational opportunities of the Indian child.

Table II indicates a comparison between Indian pupils in integrated schools and non-integrated schools. This comparison tends to isolate the school environment--integrated or non-integrated--as a factor. If those categories are selected having the majority of the items indicating a significance of less than .10 (a number usually considered fairly low in terms of dependence) four of the categories are relevant for discussion. These categories and the ratio of items are:

<u>Value Category</u>	<u>Number of Items with Significance</u>
Faith in Human Nature	2/3
Formal School Compliance	2/3
Orientation to Family Authority Scale	3/4
Occupational Values: Reward Orientation Scale	3/4

These categories indicate the following differences:

1. Non-integrated pupils demonstrated less faith in human nature than integrated youngsters.
2. Non-integrated pupils indicated less tendency to comply with school expectations than integrated pupils.
3. Non-integrated pupils indicated stronger degree of concurrence with family authority than integrated pupils.
4. Non-integrated pupils expressed a higher expectation of reward in occupational values than integrated pupils.

There is an element of suggestion as to the role and influence of the integrated school system on the Indian child in the above. That integration does occur in such settings cannot easily be disputed, but the nature of integration also tends to transform some of the basic Indian ways still held by non-integrated pupils--"respect for family authority and independence of thought and action".

Integration does seem to influence faith in human nature, but if this is equated with faith in the "white" world, it is not surprising that the school should raise the confidence level of Indian children in such a manner. The fact that Indian people usually display a deep sense of trust and faith in each other is well-established; their attitude toward other cultural patterns, however, has generally tended to be one of unfamiliarity and mistrust. Cultural exchange and pertinent learnings such as the integrated school can provide the Indian student undoubtedly

Table II  
Value Preferences of Integrated and  
Non-Integrated Indian Pupils

		Agree		Slightly Agree		Disagree		Chi-Square* Gamma
		No.	%	No.	%	No.	%	
FAITH IN HUMAN NATURE	1. Integrated	9	23.7	27	71.1	2	5.3	.7387
	Non-integ.	22	30.6	47	65.3	3	4.2	-.1591
	2. Integrated	19	50.0	7	18.4	12	31.6	.0245
	Non-integ.	31	43.1	30	41.7	11	15.3	-.0515
	3. Integrated	3	7.9	14	36.8	21	55.3	.0047
	Non-integ.	16	22.2	38	52.8	18	25.0	-.5276
FORMAL SCHOOL COMPLIANCE	4. Integrated	23	60.5	9	23.7	6	15.8	.1134
	Non-integ.	31	43.1	17	23.6	24	33.3	.3430
	5. Integrated	26	68.4	9	23.7	3	7.9	.0933
	Non-integ.	41	56.9	13	18.1	18	25.0	.2915
	6. Integrated	2	5.3	5	13.2	31	81.6	.0786
	Non-integ.	5	6.9	23	31.9	44	61.1	-.4322
FUTURISTIC ORIENTATION SCALE	7. Integrated	15	39.5	17	44.7	6	15.8	.3381
	Non-integ.	32	44.4	35	48.6	5	6.9	-.1600
	8. Integrated	11	28.9	13	34.2	14	36.8	.0004
	Non-integ.	34	47.2	33	45.8	5	6.9	-.4815
	9. Integrated	17	44.7	13	34.2	8	21.1	.5002
	Non-integ.	24	33.3	30	41.7	18	25.0	.1706
INDEPENDENCE FROM PEERS	10. Integrated	7	18.4	8	21.1	23	60.5	.2107
	Non-integ.	10	13.9	27	37.5	35	48.6	-.1319
	11. Integrated	12	31.6	21	55.3	5	13.2	.0962
	Non-integ.	38	52.8	26	36.1	8	11.1	-.3200
	12. Integrated	9	23.7	17	44.7	12	31.6	.3775
	Non-integ.	24	33.3	33	45.8	15	20.8	-.2277
	13. Integrated	13	34.2	14	36.8	11	28.9	.7292
	Non-integ.	28	38.9	28	38.9	16	22.2	-.1175

\*Upper figure in each row signifies Chi-Square value; lower figure signifies gamma.

Table II (continued)

			Agree		Slightly Agree		Disagree		Chi-Square Gamma
			No.	%	No.	%	No.	%	
INSTRUMENTAL ORIENTATION SCALE	14.	Integrated	11	28.9	1	2.6	26	68.4	.5683
		Non-integ.	17	23.6	5	6.9	50	69.4	.0531
	15.	Integrated	27	71.1	7	18.4	4	10.5	.5950
		Non-integ.	56	77.8	12	16.7	4	5.6	-.1815
	16.	Integrated	8	21.1	5	13.2	25	65.8	.5593
		Non-integ.	10	13.9	8	11.1	54	75.0	.2101
ORIENTATION TO FAMILY AUTHORITY SCALE	17.	Integrated	14	36.8	17	44.7	7	18.4	.0422
		Non-integ.	44	61.1	22	30.6	6	8.3	-.4202
	18.	Integrated	16	42.1	12	31.6	10	26.3	.0765
		Non-integ.	16	22.2	26	36.1	30	41.7	.3448
	19.	Integrated	9	23.7	15	39.5	14	36.8	.2197
		Non-integ.	29	40.3	22	30.6	21	29.2	-.2415
OCCUPATIONAL VALUES: REWARD ORIENTATION SCALE	20.	Integrated	27	71.1	9	23.7	2	5.3	.0937
		Non-integ.	63	87.5	8	11.1	1	1.4	-.4755
	21.	Integrated	16	42.1	13	34.2	9	23.7	.0430
		Non-integ.	38	52.8	29	40.3	5	6.9	-.2860
	22.	Integrated	14	36.8	13	34.2	11	28.9	.0978
		Non-integ.	30	41.7	33	45.8	9	12.5	-.2114
OCCUPATIONAL VALUES: SOCIAL ORIENTATION SCALE	23.	Integrated	15	39.5	17	44.7	6	15.8	.0722
		Non-integ.	39	54.2	30	41.7	3	4.2	-.3272
	24.	Integrated	31	81.6	5	13.2	2	5.3	.4873
		Non-integ.	62	86.1	9	12.5	1	1.4	-.1786
	25.	Integrated	19	50.0	13	34.2	6	15.8	.0988
		Non-integ.	38	52.8	31	43.1	3	4.2	-.1400
	26.	Integrated	27	71.1	10	26.3	1	2.6	.6318
		Non-integ.	48	66.7	19	26.4	5	6.9	.1213
	27.	Integrated	8	21.1	14	36.8	16	42.1	.4515
		Non-integ.	16	22.2	34	47.2	22	30.6	-.1506



Table II (continued)

		Agree		Slightly Agree		Disagree		Chi-Square Gamma
		No.	%	No.	%	No.	%	
EXPRESSIVE ORIENTATION SCALE	28. Integrated	23	60.5	12	31.6	3	7.9	.5370
	Non-integ.	36	50.0	27	37.5	9	12.5	.2023
	29. Integrated	22	57.9	14	36.8	2	5.3	.6610
	Non-integ.	37	51.4	28	38.9	7	9.7	.1451
	30. Integrated	34	89.5	3	7.9	1	2.6	.0099
	Non-integ.	45	62.5	24	33.3	3	4.2	.6393
INDEX OF AUTONOMY	31. Integrated	8	21.1	14	36.8	16	42.1	.3791
	Non-integ.	14	19.4	36	50.0	22	30.6	-.1267
	32. Integrated	6	15.8	19	50.0	13	34.2	.5048
	Non-integ.	12	16.7	28	38.9	32	44.4	.1282
	33. Integrated	9	23.7	18	47.4	11	28.9	.9530
	Non-integ.	19	26.4	33	45.8	20	27.8	-.0440
INDEX OF IDEALIZED SCHOOL GOALS	34. Integrated	29	76.3	4	10.5	5	13.2	.2198
	Non-integ.	51	70.8	16	22.2	5	6.9	.0771
	35. Integrated	29	76.3	8	21.1	1	2.6	.7054
	Non-integ.	58	80.6	11	15.3	3	4.2	-.1070
	36. Integrated	33	86.8	5	13.2	0	0.0	0.0
	Non-integ.	62	86.1	8	11.1	2	2.8	.0462
INDEX OF SELF-ESTEEM	37. Integrated	16	42.1	16	42.1	6	15.8	.6140
	Non-integ.	24	33.3	37	51.4	11	15.3	.1145
	38. Integrated	9	23.7	10	26.3	19	50.0	.2269
	Non-integ.	21	29.2	27	37.5	24	33.3	-.2323
	39. Integrated	19	50.0	15	39.5	4	10.5	.9077
	Non-integ.	38	53.5	25	35.2	8	11.3	-.0478
	40. Integrated	25	65.8	11	28.9	2	5.3	.7876
	Non-integ.	42	59.2	25	35.2	4	5.6	.1267

N: Integrated = 38  
Non-Integrated = 72

lead to a lessening of mistrust in the non-Indian world.

Seymour W. Itzkoff, in a recently published study of cultural pluralism and integration, cites an argument which stresses the inevitability of integration not only breaking the pattern of minority group debasements, but serving as well to ameliorate the guilt that has been so long heavy on non-minority group shoulders.<sup>27</sup> However, and conversely, should full integration occur, Itzkoff asserts, it will teach the non-Indian a concept of democracy for which he is not totally prepared. He cautions against the popular notion that a society is greater than the sum of its parts, a note of warning perhaps, to those who optimistically assume that even if full integration of minority groups occurs the superficialities that might remain will be easily absorbed.<sup>28</sup> The study points out difficulties to be encountered through integration if an over-optimistic view is taken regarding the possibilities of such a policy.

#### Blackfoot Indian Pupils and their Parents

The tabulations in Table III indicate value-preference differences between forty Blackfoot Indian parents of grade school children and seventy-one Blackfoot Indian pupils attending both integrated (26) and non-integrated (45) schools. Gamma figures could not be calculated in a number of cases since responses were not always made for all of the three choices available for each item. However, accepting the .05 level of significance for the Chi-square test, eight of the twelve value categories utilized reveal at least half the items as being different.

Table III

Value Preferences of Integrated and Non-Integrated  
Blackfoot Pupils and their Parents

			Agree		Slightly Agree		Disagree		Chi-Square*
			No.	%	No.	%	No.	%	Gamma
FAITH IN HUMAN NATURE	1.	Pupils	25	35.2	46	64.8			.2887
		Parents	21	52.5	19	47.5			.0000
	2.	Pupils	29	40.8	29	40.8	13	18.3	.0311
		Parents	13	33.3	10	25.6	16	41.0	.2862
	3.	Pupils	14	19.7	35	49.3	22	31.0	.0000
		Parents	5	12.5	4	10.0	31	77.5	.6170
FORMAL SCHOOL COMPLIANCE	4.	Pupils	36	50.7	17	23.9	18	25.4	.1154
		Parents	13	32.5	10	25.0	17	42.5	.3302
	5.	Pupils	41	57.7	15	21.1	15	21.1	.0211
		Parents	31	77.5	1	2.5	8	20.0	.3180
	6.	Pupils	26	36.6			45	63.4	.1640
		Parents	7	17.5			33	82.5	.0000
FUTURISTIC ORIENTATION SCALE	7.	Pupils	34	47.9	37	52.1			.0176
		Parents	31	77.5	9	22.5			.0000
	8.	Pupils	28	39.4	35	49.3	8	11.3	.0193
		Parents	18	46.2	10	25.6	11	28.2	.0651
	9.	Pupils	21	29.6	34	47.9	16	22.5	.0003
		Parents	14	35.0	5	12.5	21	52.5	.2353
INDEPENDENCE FROM PEERS	10.	Pupils	14	19.7	25	35.2	32	45.1	.1347
		Parents	9	22.5	7	17.5	24	60.0	.1677
	11.	Pupils	28	39.4	32	45.1	11	15.5	.0068
		Parents	25	64.1	6	15.4	8	20.5	-.2756
	12.	Pupils	21	29.6	30	42.3	20	28.2	.0058
		Parents	22	57.9	6	15.8	10	26.3	-.3147
	13.	Pupils	24	33.8	29	40.8	18	25.4	0.0002
		Parents	8	20.0	6	15.0	26	65.0	.5174

\*Upper figure in each row signifies Chi-Square value; lower figure signifies gamma.

Table III (continued)

			Agree		Slightly Agree		Disagree		Chi-Square Gamma
			No.	%	No.	%	No.	%	
INSTRUMENTAL ORIENTATION SCALE	14.	Pupils	20	28.2			51	71.8	.9394
		Parents	9	23.1			30	76.9	.0000
	15.	Pupils	55	77.5	16	22.5			.2129
		Parents	37	92.5	3	7.5			.0000
	16.	Pupils	19	26.8			52	73.2	.0893
		Parents	3	7.5			37	92.5	.0000
ORIENTATION TO FAMILY AUTHORITY SCALE	17.	Pupils	31	43.7	32	45.1	8	11.3	.0260
		Parents	15	39.5	11	28.9	12	31.6	.2291
	18.	Pupils	24	33.8	20	28.2	27	38.0	.0804
		Parents	6	15.4	11	28.2	22	56.4	.3606
	19.	Pupils	25	35.2	30	42.3	16	22.5	.0041
		Parents	26	68.4	8	21.1	4	10.5	-.5183
OCCUPATIONAL VALUES: REWARD ORIENTATION SCALE	20.	Pupils	55	77.5	16	22.5			.9949
		Parents	29	76.3	9	23.7			.0000
	21.	Pupils	36	50.7	29	40.8	6	8.5	.0005
		Parents	17	42.5	8	20.0	15	37.5	.3253
	22.	Pupils	32	45.1	27	38.0	12	16.9	.0066
		Parents	27	67.5	4	10.0	9	22.5	.2511
OCCUPATIONAL VALUES: SOCIAL ORIENTATION SCALE	23.	Pupils	35	49.3	28	39.4	8	11.3	.0071
		Parents	12	30.8	13	33.3	14	35.9	.4277
	24.	Pupils	59	83.1	12	16.9			.3378
		Parents	37	94.9	2	5.1			.0000
	25.	Pupils	36	50.7	35	49.3			.0569
		Parents	29	76.3	9	23.7			.0000
EXPRESSIVE ORIENTATION SCALE	26.	Pupils	44	62.0	27	38.0			.0656
		Parents	34	85.0	6	15.0			.0000
	27.	Pupils	13	18.3	34	47.9	24	33.8	.0117
		Parents	2	5.1	13	33.3	24	61.5	.5038

Table III (continued)

		Agree		Slightly Agree		Disagree		Chi-Square Gamma
		No.	%	No.	%	No.	%	
EXPRESSIVE ORIENTATION SCALE	28. Pupils	38	53.5	25	35.2	8	11.3	.0001
	Parents	13	32.5	8	20.0	19	47.5	.5055
	29. Pupils	40	56.3	31	43.7			.3800
	Parents	28	71.8	11	28.2			.00
	30. Pupils	47	66.2	24	33.8			.0018
	Parents	39	97.5	1	2.5			.00
INDEX OF AUTONOMY	31. Pupils	10	14.1	35	49.3	26	36.6	.0028
	Parents	17	42.5	11	27.5	12	30.0	-.3411
	32. Pupils	11	15.5	24	33.8	36	50.7	.0001
	Parents	22	55.0	7	17.5	11	27.5	-.5457
	33. Pupils	15	21.1	34	47.9	22	31.0	.0000
	Parents	26	66.7	10	25.6	3	7.7	-.6989
INDEX OF IDEALIZED SCHOOL GOALS	34. Pupils	52	73.2	19	26.8			.3177
	Parents	35	87.5	5	12.5			.00
	35. Pupils	53	74.6	18	25.4			.0530
	Parents	38	95.0	2	5.0			.00
	36. Pupils	60	84.5	11	15.5			.4042
	Parents	38	95.0	2	5.0			.00
INDEX OF SELF-ESTEEM	37. Pupils	21	29.6	36	50.7	14	19.7	.0356
	Parents	21	52.5	16	40.0	3	7.5	-.4307
	38. Pupils	21	29.6	30	42.3	20	28.2	.0018
	Parents	7	17.5	8	20.0	25	62.5	.4777
	39. Pupils	40	57.1	30	42.9			.6862
	Parents	27	67.5	13	32.5			-.1670
	40. Pupils	41	58.6	22	31.4	7	10.0	.3294
	Parents	20	50.0	12	30.0	8	20.0	.2000

N: Children = 71  
Parents = 40

The categories in question and relevant items in relation to the total number of items in each category are as follows:

<u>Value Category</u>	<u>Number of Items with Significance</u>
Faith in Human Nature	2/3
Futuristic Orientation Scale	3/3
Independence from Peers	3/4
Orientation to Family Authority Scale	2/4
Occupational Values: Reward Orientation Scale	3/4
Expressive Orientation Scale	3/4
Index of Autonomy	3/3
Index of Self-Esteem	2/4

Summarizing the basic differences, the following emerge:

1. Indian pupils demonstrated less faith in human nature than their parents.
2. Indian pupils indicated more confidence in futuristic orientations than did their parents.
3. With regard to dependence on peers, Indian children indicated a lesser degree than did parents.
4. Family authority was valued significantly higher by Indian parents than by Indian pupils.
5. Indian pupils indicated more optimism regarding reward orientation from occupation than parents.
6. Indian pupils tended to view the school as more expressively permissible than their parents; the latter tended to think more along the lines of instrumental value for the school.
7. Indian pupils tended less than their parents to declare their autonomy from parental control regarding choice of friends and the like. Parents, however, indicated that they thought their own wants for their children more important than the opinion of the teacher.
8. Indian pupils tended to be less assertive regarding their self-esteem than parents.

A few of the above differences are perhaps explainable in terms of



general differences between parents and offspring regardless of cultural uniqueness; the fact, for example, that parents expressed a greater preference for family authority than did their children, or that children expected more occupational rewards than parents. This assumption might also be conjectured regarding the factor of futuristic orientation; however, in the case of Indian society, there is evidence to indicate that future planning by Indian adults borders very heavily upon pessimistic outlooks. The Indian pavilion at the Canadian Exposition demonstrated the negativistic manner in which Indians face their future, and this outlook is well documented by references to past treatment of Indians by citizens and governments alike.<sup>29</sup> This same attitude may be a basis for the differences expressed by parents and children regarding self-esteem in that the parents, somewhat set back by present circumstances, have developed a degree of defiance easily interpreted as self-esteem if care is not taken to denote other relational motivations.

Differences between groups such as parents and children are to be anticipated when any effort is negotiated to measure them. To a large extent the results are explainable by such factors as a changing society, technological transformation, and vanishing traditional mores and values. That the school is a factor in developing changes through formal socialization is as well a fairly reliable kind of phenomenon to identify. In the case of intercultural education--the intermingling of one cultural group with another in an educational setting, it is to be expected that radical modifications will occur. In Canada, if present governmental trends continue, that is, to continue to raise the number of Indian

Table IV  
Value Preferences of Integrated Blackfoot  
Pupils and their Parents

		Agree		Slightly Agree		Disagree	Chi-Square* Gamma
		No.	%	No.	%	No.	%
FAITH IN HUMAN NATURE	1. Pupils	8	30.8	18	69.2		.3324
	Parents	21	52.5	19	47.5		.0000
	2. Pupils	11	42.3	8	30.8	7	26.9
	Parents	13	33.3	10	25.6	16	41.0
	3. Pupils	3	11.5	12	46.2	11	42.3
	Parents	5	12.5	4	10.0	31	77.5
FORMAL SCHOOL COMPLIANCE	4. Pupils	13	50.0	8	30.8	5	19.2
	Parents	13	32.5	10	25.0	17	42.5
	5. Pupils	19	73.1	5	19.2	2	7.7
	Parents	31	77.5	1	2.5	8	20.0
	6. Pupils	6	23.1			20	76.9
	Parents	7	17.5			33	82.5
FUTURISTIC ORIENTATION SCALE	7. Pupils	13	50.0	13	50.0		.1227
	Parents	31	77.5	9	22.5		.0000
	8. Pupils	9	34.6	10	38.5	7	26.9
	Parents	18	45.2	10	25.6	11	28.2
	9. Pupils	9	34.6	13	50.0	4	15.4
	Parents	14	35.0	5	12.5	21	52.5
INDEPENDENCE FROM PEERS	10. Pupils	5	19.2	4	15.4	17	65.4
	Parents	9	22.5	7	17.5	24	60.0
	11. Pupils	9	34.6	12	46.2	5	19.2
	Parents	25	64.1	6	15.4	8	20.5
	12. Pupils	6	23.1	11	42.3	9	34.6
	Parents	22	57.9	6	15.8	10	26.3
	13. Pupils	6	23.1	11	42.3	9	34.6
	Parents	8	20.0	6	15.0	26	65.0

\*Upper figure in each row signifies Chi-Square value; lower figure signifies gamma.

Table IV (continued)

			Agree		Slightly Agree		Disagree	Chi-Square Gamma
			No.	%	No.	%	No.	%
INSTRUMENTAL ORIENTATION SCALE	14.	Pupils	7	26.9			19	73.1
		Parents	9	23.1			30	76.9
	15.	Pupils	18	69.2	8	30.8		
		Parents	37	92.5	3	7.5		
	16.	Pupils	7	26.9			19	73.1
		Parents	3	7.5			37	92.5
ORIENTATION TO FAMILY AUTHORITY SCALE	17.	Pupils	7	26.9	14	53.8	5	19.2
		Parents	15	39.5	11	28.9	12	31.6
	18.	Pupils	13	50.0	9	34.6	4	15.4
		Parents	6	15.4	11	28.2	22	56.4
	19.	Pupils	8	30.8	14	53.8	4	15.4
		Parents	26	68.4	8	21.1	4	10.5
OCCUPATIONAL VALUES: REWARD ORIENTATION SCALE	20.	Pupils	17	65.4	9	34.5		
		Parents	29	76.3	9	23.7		
	21.	Pupils	12	46.2	11	42.3	3	11.5
		Parents	17	42.5	8	20.0	15	37.5
	22.	Pupils	11	42.3	8	30.8	7	26.9
		Parents	27	67.5	4	10.0	9	22.5
OCCUPATIONAL VALUES: SOCIAL ORIENTATION SCALE	23.	Pupils	12	46.2	8	30.8	6	23.1
		Parents	12	30.8	13	33.3	14	35.9
	24.	Pupils	23	88.5	3	11.5		
		Parents	37	94.9	2	5.1		
	25.	Pupils	16	61.5	10	38.5		
		Parents	29	76.3	9	23.7		
	26.	Pupils	18	69.2	8	30.8		
		Parents	34	85.7	6	15.0		
	27.	Pupils	4	15.4	12	46.2	10	38.5
		Parents	2	5.1	13	33.3	24	61.5

Table IV (continued)

		Agree		Slightly Agree		Disagree		Chi-Square Gamma
		No.	%	No.	%	No.	%	
EXPRESSIVE ORIENTATION SCALE	28. Pupils	14	53.8	11	42.3	1	3.8	.0008
	Parents	13	32.5	8	20.0	19	47.5	.5632
	29. Pupils	14	53.8	12	46.2			.4740
	Parents	28	71.8	11	28.2			.0000
	30. Pupils	22	84.6	4	15.4			.3460
	Parents	39	97.5	1	2.5			.0000
INDEX OF AUTONOMY	31. Pupils	4	15.4	13	50.0	9	34.6	.0513
	Parents	17	42.5	11	27.5	12	30.0	-.3121
	32. Pupils	4	15.4	9	34.6	13	50.0	.0056
	Parents	22	55.0	7	17.5	11	27.5	-.5416
	33. Pupils	6	23.1	13	50.0	7	26.9	.0020
	Parents	26	66.7	10	25.6	3	7.7	-.6690
INDEX OF IDEALIZED SCHOOL GOALS	34. Pupils	22	84.6	4	15.4			.9994
	Parents	35	87.5	5	12.5			.0000
	35. Pupils	20	76.9	6	23.1			.1934
	Parents	38	95.0	2	5.0			.0000
	36. Pupils	24	92.3	2	7.7			.9968
	Parents	38	95.0	2	5.0			.0000
INDEX OF SELF-ESTEEM	37. Pupils	7	26.9	12	46.2	7	26.9	.0389
	Parents	21	52.5	16	40.0	3	7.5	-.5029
	38. Pupils	8	30.8	9	34.6	9	34.6	.0860
	Parents	7	17.5	8	20.0	25	62.5	.4236
	39. Pupils	15	57.7	11	42.3			.8608
	Parents	27	67.5	13	32.5			.0000
	40. Pupils	17	65.4	5	19.2	4	15.4	.4585
	Parents	20	50.0	12	30.0	8	20.0	.2500

N: Pupils = 26  
Parents = 40

students enrolled in integrated schools<sup>30</sup>, the role of the school becomes even more consequential. Table IV, comparing the value-preferences of integrated pupils and parents, and Table V, comparing value-preferences of non-integrated pupils and parents serve to demonstrate to some extent the significance of the school in value-formation and change.

Reading from Table IV four of the value categories indicate at least half of the items to be significant at the accepted significance level of .05 (in two of the items, the Chi-square readings of .06 and .08 are included). These four value categories are:

<u>Value Category</u>	<u>Number of Items with Significance</u>
Independence from Peers	3/4
Orientation to Family Authority Scale	2/4
Occupational Values: Reward Orientation Scale	2/4
Index of Self-Esteem	2/4

The four categories are included in the above list of significant differences revealed by Table III, which compared all Blackfoot children in the study and their parents. Interpretations of these categorical differences are:

1. Integrated Indian children tended somewhat to display a lesser dependence on peers than did their parents.
2. Integrated Indian pupils demonstrated less favour for strong family authority than parents.
3. Integrated Indian children displayed a higher degree of faith in future occupational rewards than parents.
4. Integrated Indian pupils demonstrated a lesser degree of self-esteem than did parents. Again, the concept of defiance and pride may be partially responsible for the strength of parental response.

The above conclusions compare with differences noted with respect to the total sample of Indian children and parents. In this sense the differences must be attributed to the influence of the school since it represents the factor differentiating the situation of the integrated and the non-integrated Indian pupil respondent.

Table V compares the non-integrated pupil and the parents. Since differences tend to be slight, Chi-Square significances are difficult to interpret; Gamma statistics are not available in most cases because responses to many items were limited to less than three choices available.

Nine of twelve value categories according to Table V indicate significant changes in value-preferences between non-integrated Indian pupils and their parents. The table indicates to some degree the influence of the all-Indian school on the values of Indian pupils since the sample of non-integrated pupils attended such an institution. In some of the cases Gamma calculations are not available because selection of choices did not include all of the three responses possible.

<u>Value Category</u>	<u>Number of Items with Significance</u>
Faith in Human Nature	2/3
Formal School Compliance	2/3
Futuristic Orientation Scale	3/3
Independence from Peers	4/4
Orientation to Family Authority Scale	2/4
Occupational Values: Reward Orientation Scale	3/4
Social Orientation Scale	2/2
Index of Autonomy	3/4

The above categories include only those with at least half the items with a minimum of .05 level of Chi-square significance. In contrast to their parents, the non-integrated sample of Indian children



Table V  
Value Preferences of Non-Integrated Blackfoot  
Pupils and their Parents

			Agree		Slightly Agree		Disagree	Chi-Square*
			No.	%	No.	%	No.	Gamma
			No.	%	No.	%	No.	%
FAITH IN HUMAN NATURE	1.	Pupils	17	37.8	28	62.2		.5182
		Parents	21	52.5	19	47.5		.00
	2.	Pupils	18	40.0	21	46.7	6	13.3
		Parents	13	33.3	10	25.6	16	41.0
	3.	Pupils	11	24.4	23	51.1	11	24.4
		Parents	5	12.5	4	10.0	31	77.5
FORMAL SCHOOL COMPLIANCE	4.	Pupils	23	51.1	9	20.0	13	28.9
		Parents	13	32.5	10	25.0	17	42.5
	5.	Pupils	22	48.9	10	22.2	13	28.9
		Parents	31	77.5	1	2.5	8	20.0
	6.	Pupils	20	44.4			25	55.6
		Parents	7	17.5			33	82.5
FUTURISTIC ORIENTATION SCALE	7.	Pupils	21	46.7	24	53.3		.0268
		Parents	31	77.5	9	22.5		.00
	8.	Pupils	19	42.2	25	55.6	1	2.2
		Parents	18	46.2	10	25.6	11	28.2
	9.	Pupils	12	26.7	21	46.7	12	26.7
		Parents	14	35.0	5	12.5	21	52.5
INDEPENDENCE FROM PEERS	10.	Pupils	9	20.0	21	46.7	15	33.3
		Parents	9	22.5	7	17.5	24	60.0
	11.	Pupils	19	42.2	20	44.4	6	13.3
		Parents	25	64.1	6	15.4	8	20.5
	12.	Pupils	15	33.3	19	42.2	11	24.4
		Parents	22	57.9	6	15.8	10	26.3
	13.	Pupils	18	40.0	18	40.0	9	20.0
		Parents	8	20.0	6	15.0	26	65.0

\*Upper figure in each row signifies Chi-Square value; lower figure signifies gamma.

Table V (continued)

			Agree		Slightly Agree		Disagree		Chi-Square Gamma
			No.	%	No.	%	No.	%	
INSTRUMENTAL ORIENTATION SCALE	14.	Pupils	13	28.9			32	71.1	.9388
		Parents	9	23.1			30	76.9	.00
	15.	Pupils	37	82.2	8	17.8			.5526
		Parents	37	92.5	3	7.5			.00
	16.	Pupils	12	26.7			33	73.3	.1269
		Parents	3	7.5			37	92.5	.00
ORIENTATION TO FAMILY AUTHORITY SCALE	17.	Pupils	24	53.3	18	40.0	3	6.7	.0133
		Parents	15	39.5	11	28.9	12	31.6	.3763
	18.	Pupils	11	24.4	11	24.4	23	51.1	.5858
		Parents	6	15.4	11	28.2	22	56.4	.1394
	19.	Pupils	17	37.8	16	35.6	12	26.7	.0182
		Parents	26	68.4	8	21.1	4	10.5	-.5092
OCCUPATIONAL VALUES: REWARD ORIENTATION SCALE	20.	Pupils	38	84.4	7	15.6			.8046
		Parents	29	76.3	9	23.7			.0000
	21.	Pupils	24	53.3	18	40.0	3	6.7	.0017
		Parents	17	42.5	8	20.0	15	37.5	.3666
	22.	Pupils	21	46.7	19	42.2	5	11.1	.0033
		Parents	27	67.5	4	10.0	9	22.5	-.2014
OCCUPATIONAL VALUES: SOCIAL ORIENTATION SCALE	23.	Pupils	23	51.1	20	44.4	2	4.4	.0011
		Parents	12	30.8	13	33.3	14	35.9	.5130
	24.	Pupils	36	80.0	9	20.0			.2395
		Parents	37	94.9	2	5.1			.00
	25.	Pupils	20	44.4	25	55.6			.0247
		Parents	29	76.3	9	23.7			.00
	26.	Pupils	26	57.8	19	42.2			.0425
		Parents	34	85.0	6	15.0			.00
	27.	Pupils	9	20.0	22	48.9	14	31.1	.0110
		Parents	2	5.1	13	33.3	24	61.5	.5444

Table V (continued)

			Agree		Slightly Agree		Disagree		Chi-Square Gamma
			No.	%	No.	%	No.	%	
EXPRESSIVE ORIENTATION SCALE	28.	Pupils	24	53.3	14	31.1	7	15.6	.0061
		Parents	13	32.5	8	20.0	19	47.5	.4706
	29.	Pupils	26	57.8	19	42.2			.5408
		Parents	28	71.8	11	28.2			.00
	30.	Pupils	25	55.6	20	44.4			.0001
		Parents	39	97.5	1	2.5			.00
INDEX OF AUTONOMY	31.	Pupils	6	13.3	22	48.9	17	37.8	.0085
		Parents	17	42.5	11	27.5	12	30.0	-.3578
	32.	Pupils	7	15.6	15	33.3	23	51.1	.0007
		Parents	22	55.0	7	17.5	11	27.5	-.5481
	33.	Pupils	9	20.0	21	46.7	15	33.3	.0000
		Parents	26	66.7	10	25.6	3	7.7	-.7156
INDEX OF IDEALIZED SCHOOL GOALS	34.	Pupils	30	66.7	15	33.3			.1335
		Parents	35	87.5	5	12.5			.00
	35.	Pupils	33	73.3	12	26.7			.0563
		Parents	38	95.0	2	5.0			.00
	36.	Pupils	36	80.0	9	20.0			.2214
		Parents	38	95.0	2	5.0			.00
INDEX OF SELF-ESTEEM	37.	Pupils	14	31.1	24	53.3	7	15.6	.1153
		Parents	21	52.5	16	40.0	3	7.5	-.3860
	38.	Pupils	13	28.9	21	46.7	11	24.4	.0016
		Parents	7	17.5	8	20.0	25	62.5	.5071
	39.	Pupils	25	56.8	19	43.2			.7366
		Parents	27	67.5	13	32.5			.00
	40.	Pupils	24	54.5	17	38.6	3	6.8	.1906
		Parents	20	50.0	12	30.0	8	20.0	.1711

N: Pupils = 45  
Parents = 40

displayed the following:

1. Less faith in human nature.
2. More confidence in the teacher's decisions but less adherence to school regulation compliance.
3. Less optimism about futuristic planning. The reverse was noticeable in the other two previous comparisons of Indian pupils and parents. The differentiating variable in this case is evidently the non-integrated school.
4. Less independence from peers. This category, however, appears in this case to contain some lack of clarity with regard to one item - it may be a question of terminology, but Indian children indicated less objection to being labelled an "odd-ball".
5. Less appreciation for family authority.
6. A greater degree of expectancy regarding occupational rewards.
7. Less indication for social aspects of occupations.
8. More of a tendency to regard school as an outlet for expression.
9. Less preference for individual autonomy than parents.

Three of the above value category differences are also noticeable in contrasting integrated pupil profiles with parents; seven are in common with differences emitted when contrasting the entire sample of Blackfoot Indian children with parents, the differences being that in the total sample of Indian pupils differences were also obvious in the Index of Self-Esteem, and in the non-integrated Indian pupil sample differences were also significant in the Formal School Compliance and Social Orientation Scales. It might be a fairly uncomplicated matter to explain the lower self-esteem of pupils in integrated school situations because of the competitiveness with non-Indian children, but the lack of appreciation for school compliance and for the social aspects of a

life's work indicate something particular about the non-integrated school environment. It is a relatively customary idea to chide the integrated school philosophy for its obvious ailments in lowering significantly the self-esteem of the Indian child, possibly even to the extent that serious repercussions of rebellion or apathy develop. Heretofore, the alternative has been a somewhat isolated school situation, usually related to religious philosophies where the primary emphasis has not always been the development of skills, subject matters or academic pursuits but rather the spiritual welfare of the child. More recently, the dissolution or near obliteration of the residential church-run school with teachers of various backgrounds coming to teach, has transformed the format of the school somewhat and perhaps even the objectives of education. In some situations, although students no longer reside at these schools, the overtones of theology still linger. Teachers, however, since more stringent governmental control is exercised, are expected to have academic qualifications as a first prerequisite instead of certain religious beliefs. This does not imply that teachers have completely absolved themselves of a missionary zest or a patronizing motivation, for indications are that many teachers of Indian children possess values, attitudes and backgrounds quite different from those of the Indian community thereby contributing toward a completely new kind of educational adjustment for Indian pupils.\*

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\*The First Alberta Native Women's Conference, Edmonton, March 12 - 15, 1968, dealt with native education, and expressed the following regarding teachers of native children:

"Teachers coming from Europe and the Philippines should all go to a workshop on the Canadian way of life; let them adjust to our way of

The Hawthorn Report elaborates the observation that teaching in Indian schools has never been an ideal situation. Low salary scales, the poor reputation of Indian education, inadequate pension arrangements, and professional isolation are among conditions which a teacher can expect to encounter when hiring on to teach in an Indian school.<sup>31</sup> In addition, up till five years ago, anyone could teach in an Indian school with virtually no academic qualifications. Although these conditions have been bettered considerably in recent years, this research indicates that there are still some aspects about teaching which influence pupils which may not be as desirable as they might be. A comparison of teacher value-preferences with those of Indian pupils brings this to the fore.

#### Blackfoot Indian Pupils and their Teachers

The sample of Indian pupils consisted of 71 Blackfoot Indian pupils enrolled in both integrated and non-integrated (one school) school situations. Teachers involved in this sample included only those who taught at schools where Blackfoot children were enrolled. These teachers were, in fact, the teachers of the pupils in the study.

Table VI contains figures of two groups of teachers, those involved in the research of this study and enrolled in the "Course for Teachers in Indian Education", and a "control" group, i.e. also teachers of

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life before coming to the northern communities.

"We think the five-day orientation is not enough for these teachers to learn about Indian or even to learn good English.

"In northern schools mostly teachers use crude words to our children, making personal remarks." Page 16, Proceedings.



Table VI  
Value Preferences of Experimental  
and Control Teachers

		Agree		Slightly Agree		Disagree		Chi-Square*
		No.	%	No.	%	No.	%	
FAITH IN HUMAN NATURE	1. Experimental	12	100.0	0	0.0			.02592
	Control	8	66.7	4	33.3			
	2. Experimental	6	46.2			7	53.8	.9871
	Control	5	41.7			7	58.3	
	3. Experimental	1	7.1			12	92.9	.8100
	Control	1	8.3			11	91.7	
FORMAL SCHOOL COMPLIANCE	4. Experimental	1	9.1	10	90.9			.2373
	Control	6	50.0	6	50.0			
	5. Experimental	12	92.3			1	7.7	1.0000
	Control	12	100.0			0	0.0	
	6. Experimental	3	25.0			9	75.0	.4668
	Control	0	0.0			12	100.0	
FUTURISTIC ORIENTATION SCALE	7. Experimental	4	30.8			9	69.2	.9943
	Control	3	25.0			9	75.0	
	8. Experimental	2	15.4			11	84.6	.7781
	Control	0	0.0			12	100.0	
	9. Experimental	3	23.1			10	76.9	.9899
	Control	4	33.3			8	66.7	
INDEPENDENCE FROM PEERS	10. Experimental	7	53.8	6	46.2			.8121
	Control	4	33.3	8	66.7			
	11. Experimental	7	53.8			6	46.2	.9664
	Control	8	66.7			4	33.3	
	12. Experimental	12	92.3			1	7.7	.8068
	Control	9	75.0			3	25.0	
	13. Experimental	3	23.1			10	76.9	.9968
	Control	2	16.7			10	83.3	

\*Upper figure in each row signifies Chi-Square value; lower figure signifies gamma.

Table VI (continued)

			Agree		Slightly Agree		Disagree		Chi-Square
			No.	%	No.	%	No.	%	
INSTRUMENTAL ORIENTATION SCALE	14.	Experimental	2	15.4			11	84.5	.9988
		Control	1	8.3			11	91.7	
	15.	Experimental	9	69.2	4	30.8			.9321
		Control	10	83.3	2	16.7			
	16.	Experimental					13	100.0	
		Control					12	100.0	
ORIENTATION TO FAMILY AUTHORITY SCALE	17.	Experimental	9	75.0			3	25.0	.9105
		Control	7	58.3			5	41.7	
	18.	Experimental	10	76.9			3	23.1	.9447
		Control	9	75.0			3	25.0	
	19.	Experimental	4	30.8	9	69.2			.9862
		Control	5	41.7	7	58.3			
OCCUPATIONAL VALUES: REWARD ORIENTATION SCALE	20.	Experimental	3	23.1	10	76.9			.9447
		Control	3	25.0	9	75.0			
	21.	Experimental	4	30.8			9	69.2	.9630
		Control	4	33.3			8	66.7	
	22.	Experimental	7	53.8			6	46.2	.9817
		Control	6	50.0			6	50.0	
SOCIAL ORIENTATION SCALE	23.	Experimental	5	38.5			8	61.5	.9911
		Control	4	33.3			8	66.7	
	24.	Experimental	7	53.8	6	46.2			.9751
		Control	5	41.7	7	58.3			
	25.	Experimental	6	46.2	7	53.8			.7824
		Control	3	25.0	9	75.0			
27.	Experimental	3	23.1				10	76.9	.0867
	Control	9	75.0				3	25.0	

Table VI (continued)

			Agree		Slightly Agree		Disagree		Chi-Square
			No.	%	No.	%	No.	%	
EXPRESSIVE ORIENTATION SCALE	28.	Experimental	7	58.3			5	41.7	1.0000
		Control	8	66.7			4	33.3	
	29.	Experimental	12	92.3	1	7.7			.8100
		Control	11	91.7	1	8.3			
	30.	Experimental	12	92.3	1	7.7			.8100
		Control	11	91.7	1	8.3			
INDEX OF AUTONOMY	31.	Experimental	10	90.9			1	9.1	.9985
		Control	10	83.3			2	16.7	
	32.	Experimental	6	54.5			5	45.5	.5672
		Control	10	83.3			2	16.7	
	33.	Experimental	7	58.3	5	41.7			.9200
		Control	5	41.7	7	58.3			
INDEX OF IDEALIZED SCHOOL GOALS	34.	Experimental	2	15.4	11	84.6			.5858
		Control	5	41.7	7	58.3			
	35.	Experimental	11	84.6	2	15.4			.9090
		Control	10	83.3	2	16.7			
	36.	Experimental	11	84.6	2	15.4			.9988
		Control	11	91.7	1	8.3			
INDEX OF SELF-ESTEEM	37.	Experimental	9	69.2	4	30.8			.9630
		Control	8	66.7	4	33.3			
	38.	Experimental	2	16.7			10	83.3	1.0000
		Control	1	8.3			11	91.7	
	39.	Experimental	6	50.0	5	41.7	1	8.3	.8007
		Control	6	50.0	4	33.3	2	16.7	
	40.	Experimental	8	72.7			3	27.3	.5471
		Control	5	41.7			7	58.3	

N: Experimental = 13  
Control = 12

Indian children who agreed to participate in testing (including testing of value-preferences) in order to make possible a comparison. The intention was to determine whether value-preferences of teachers involved in the perception study were greatly different from the other "control" teachers.

References to Table VI indicate that only a single item indicates a significance of .05 level, and Gamma figures were not calculable because the majority of the responses fell into only two of the possibilities. It might well have been possible to probe the value differences between children and teachers in the non-integrated schools but the sample of teachers teaching at the grade levels of the perception study would have been very limited. Hence, it could not be undertaken validly. The information in Table VI then, provides data showing no significant differences between teachers involved in this study and the other group of volunteer teachers who also participated in the testing. With regard to value-preferences at least, distinctions between these teachers were minute.

Comparisons of other characteristics of teachers, such as background, education, etc. might well have substantiated earlier observations about teaching in all-Indian schools; teachers in those circumstances, until very recently, possessed limited education, lacked experience, and were possibly of foreign extraction with the added difficulty of adjusting themselves to an entirely different set of mores, customs and values.

The final comparison in this section of the report has to do with

the Blackfoot pupils and their teachers. This sample includes one non-integrated school as well as several schools in the area of the Blackfoot reservation. This comparison makes possible observations which indicate the kinds of influences teachers have value-wise contrasted with those of parents of Indian pupils. The comparisons indicate the trend of influence out of which rise implications for educational planning and practice of future Indian education developments. Dr. Leslie R. Gue, of the University of Alberta, in his study of the schools of the Northlands School Division, discovered that fourteen year old Indian pupils are at a critically important age, and that they "try out" the white man's individualism for one year and then assign it a secondary role afterward.<sup>32</sup> The implication is that teachers do influence Indian youth values, and particularly so at a specific age.

Although it was not feasible to calculate the Gamma test due to the format of the response pattern, significances of Chi-squares at the .05 level of significance are available in four of the value categories when comparing Blackfoot Indian pupils with their teachers. (See Table VII.)

<u>Value Category</u>	<u>Number of Items with Significance</u>
Faith in Human Nature	2/3
Futuristic Orientation Scale	3/3
Occupational Values: Reward Orientation Scale	2/4
Index of Self-Esteem	2/4

Conclusive from Table VII are the following observations, again referring only to those value categories with at least half of the items indicating differences at the .05 level.

Table VII

Value Preferences of Blackfoot Indian  
Pupils and their Teachers

			Agree		Slightly Agree		Disagree		Chi-Square*
			No.	%	No.	%	No.	%	
FAITH IN HUMAN NATURE	1.	Pupils	66	93.0			5	7.0	.9736
		Teachers	11	100.0			0	0.0	
	2.	Pupils	29	40.8	42	59.2			.0533
		Teachers	0	0.0	12	100.0			
	3.	Pupils	49	69.0			22	31.0	.0012
		Teachers	1	8.3			11	91.7	
FORMAL SCHOOL COMPLIANCE	4.	Pupils	36	50.7	35	49.3			.8543
		Teachers	4	36.4	7	63.6			
	5.	Pupils	41	57.7	30	42.3			.0443
		Teachers	12	100.0	0	0.0			
	6.	Pupils	26	36.6			45	63.4	.9656
		Teachers	4	33.3			8	66.7	
FUTURISTIC ORIENTATION SCALE	7.	Pupils	69	97.2			2	2.8	.0000
		Teachers	4	33.3			8	66.7	
	8.	Pupils	63	88.7			8	11.3	.0000
		Teachers	2	16.7			10	83.3	
	9.	Pupils	55	77.5			16	22.5	.0211
		Teachers	4	33.3			8	66.7	
	10.	Pupils	14	19.7	57	80.3			.4258
		Teachers	5	41.7	7	58.3			
INDEPENDENCE FROM PEERS	11.	Pupils	60	84.5			11	15.5	.5552
		Teachers	8	66.7			4	33.3	
	12.	Pupils	21	29.6	50	70.4			.8453
		Teachers	2	16.7	10	83.3			
	13.	Pupils	24	33.8	47	66.2			.1226
		Teachers	0	0.0	12	100.0			

\*Upper figure in each row signifies Chi-Square value; lower figure signifies gamma.



Table VII (continued)

		Agree		Slightly Agree		Disagree		Chi-Square
		No.	%	No.	%	No.	%	
INSTRUMENTAL ORIENTATION SCALE	14.	Pupils	20	28.2		51	71.8	.9931
		Teachers	3	25.0		9	75.0	
	15.	Pupils	55	77.5	16	22.5		
		Teachers	8	66.7	4	33.3		.9043
	16.	Pupils	19	26.8		52	73.2	.2464
		Teachers	0	0.0		12	100.0	
ORIENTATION TO FAMILY AUTHORITY SCALE	17.	Pupils	63	88.7		8	11.3	.9983
		Teachers	10	83.3		2	16.7	
	18.	Pupils	44	62.0		27	38.0	.8606
		Teachers	9	75.0		3	25.0	
	19.	Pupils	55	77.5		16	22.5	.9841
		Teachers	9	75.0		3	25.0	
	20.	Pupils	55	77.5	16	22.5		.0006
		Teachers	2	16.7	10	83.3		
OCCUPATIONAL VALUES: REWARD ORIENTATION SCALE	21.	Pupils	65	91.5		6	8.5	.0004
		Teachers	5	41.7		7	58.3	
	22.	Pupils	59	83.1		12	16.9	.2852
		Teachers	7	58.3		5	41.7	
	23.	Pupils	63	88.7		8	11.3	.0021
		Teachers	5	41.7		7	58.3	
	24.	Pupils	59	83.1	12	16.9		.6406
		Teachers	8	66.7	4	33.3		
OCCUPATIONAL VALUES: SOCIAL ORIENTATION SCALE	25.	Pupils	36	50.7	35	49.3		.9659
		Teachers	6	50.0	6	50.0		
	26.	Pupils	44	62.0	27	38.0		.9970
		Teachers	7	58.3	5	41.7		
	27.	Pupils	47	66.2		24	33.8	.4262
		Teachers	5	41.7		7	58.3	

Table VII (continued)

		Agree		Slightly Agree		Disagree		Chi-Square
		No.	%	No.	%	No.	%	
EXPRESSIVE ORIENTATION SCALE	28. Pupils	63	88.7			8	11.3	.0503
	Teachers	6	54.5			5	45.5	
	29. Pupils	40	56.3	31	43.7			.1330
	Teachers	11	91.7	1	8.3			
	30. Pupils	47	66.2	24	33.8			.3533
	Teachers	11	91.7	1	8.3			
INDEX OF AUTONOMY	31. Pupils	45	63.4			26	36.6	.3429
	Teachers	10	90.9			1	9.1	
	32. Pupils	35	49.3			36	50.7	.5319
	Teachers	8	72.7			3	27.3	
	33. Pupils	15	21.1	56	78.9			.8530
	Teachers	4	33.3	8	66.7			
INDEX OF IDEALIZED SCHOOL GOALS	34. Pupils	52	73.2	19	26.8			.0561
	Teachers	4	33.3	8	66.7			
	35. Pupils	53	74.6	18	25.4			.6489
	Teachers	11	91.7	1	8.3			
	36. Pupils	60	84.5	11	15.5			.9774
	Teachers	11	91.7	1	8.3			
INDEX OF SELF-ESTEEM	37. Pupils	21	29.6	50	70.4			.0255
	Teachers	9	75.0	3	25.0			
	38. Pupils	51	71.8			20	28.2	.0036
	Teachers	2	16.7			10	83.3	
	39. Pupils	40	57.1	30	42.9			.9719
	Teachers	7	58.3	5	41.7			
	40. Pupils	63	90.0			7	10.0	.1629
	Teachers	7	63.6			4	36.4	

N: Children = 71  
Teachers = 12

1. Blackfoot Indian pupils exhibited less faith in human nature than their teachers.
2. Pupils demonstrated a more pessimistic view regarding the future than teachers.
3. Pupils indicated a higher rate of expectancy regarding occupational rewards than teachers.
4. Self-esteem is considerably lower among pupils than teachers in the sample.

In order to produce a meaningful paradigm regarding the information in Section Two, contrasting Blackfoot pupils, their parents, and their teachers, the following points might be made.

First, items are listed in which pupils demonstrated value-preferences different from either parents or teachers.

1. Faith in human nature. Pupils demonstrated less faith in human nature than parents or teachers.
2. Futuristic orientation scale. Pupils indicated less pessimism than parents, but teachers exhibited still less.
3. Occupational values: reward orientation scale. Pupils demonstrated more faith in occupational rewards than either parents or teachers.
4. Index of self-esteem. Pupils' index of self-esteem was lower than parents or teachers.

Second, items are listed in which pupils indicated no significant differences from teachers, but did from parents.

1. Independence from peers. Pupils revealed less dependence on peers than parents.
2. Orientation to family authority scale. Pupils appreciated less than parents did the authority of the family.
3. Expressive orientation scale. Pupils exhibited more than parents.
4. Index of autonomy. Pupils tended less than parents to declare autonomy in selecting friends, etc.

Third, there appear to be no significant differences when contrasting value-preferences of pupils and parents or pupils and teachers regarding Formal School Compliance, Instrumental Orientation Scale, Social Orientation Scale, or Index of School Goals. If the .06 level of significance is taken as indicative, then both items of the Social Orientation Scale indicate that Blackfoot children prefer less the concept that a life's work should offer social rewards than parents do.

## SECTION TWO: CONCEPTS OF INDIAN CULTURE

The second part of the questionnaire administered pertained to the ideas respondents might have regarding the Indian way of life, leadership, education, and Indian aspirations for their children. The computations are made on the basis of responses by Indian parents (40), teachers of Indian children (25), Indian children (110), and non-Indian children (447): basically the same population as Part I of the study. The purpose of this activity was to obtain some idea of the status and nature of the Indian way of life today as viewed by different groups, and to compare them with a view to identifying any significant variations, especially as pertains to Indian and non-Indian concepts.

As was the case with computations regarding value-orientations, several comparisons were made between groups of whom it might be expected that there would be little variation. For example, comparisons were made between "control" and "experimental" teachers, although little variation could be identified. The responses of all the teachers involved in the study were then combined and compared with those of the parents and children, Indian and non-Indian.

In order to test the degree of influence schools exert on pupils' ways of thinking and impressions, comparisons were made between responses of Indian children in non-integrated schools and Indian children attending integrated schools. Table VIII indicates these statistics.

Most of the responses indicate very few choices with "not at all" an indication, which connotes, perhaps, the very real presence of specific Indian practices, at least in the minds of Indian children. Question One deals with aspects of Indian behavior with percentages slightly higher for the "quite a lot" column by integrated youngsters with regard to "helping other people, taking part in ceremonies, telling Indian myths, and making Indian arts and crafts." Non-integrated Indian children selected "quite a lot" in larger percentages with regard only to "talking the Indian language and ceremonies of the societies." In all cases the differences between columns selected were only slight.

The three questions on Indian leadership show a noticeable difference in the latter two--those pertaining to cooperation with band managers, and respecting people who give advice. In both cases, children in integrated schools indicated a percentaged response slightly higher regarding "quite a lot" choice. This phenomenon corresponds with the first section in that children in integrated schools tend to emphasize more the unique aspects of the Indian way of life. The reason is difficult to decipher because the reverse might more likely be expected, i.e. children in non-integrated schools would emphasize more the eccentricities of their native culture. There is a possibility that with current trends to emphasize Indian cultures in integrated schools, the

Table VIII

Concepts of Indian Culture: Indian Pupils  
(Integrated and Non-Integrated)

	<u>Quite a Lot</u>		<u>Some</u>		<u>Not at All</u>		$\bar{X}$
	%	No.	%	No.	%	No.	
1. How much do you think Indian people still like to do the following:							
(a) Act in ways toward helping other people.							
Integrated	52.5	21	45.0	25	2.5	1	1.500
Non-integrated	27.8	20	72.2	52	0.0	0	1.722
(b) Take part in Indian dances and ceremonies.							
Integrated	35.0	14	50.0	20	15.0	6	1.800
Non-integrated	48.6	35	45.8	33	5.6	4	1.569
(c) Talk the Indian language.							
Integrated	70.0	28	25.0	10	7.5	2	1.350
Non-integrated	80.6	58	15.3	11	4.2	3	1.236
(d) Take part in activities and ceremonies of societies.							
Integrated	20.0	8	72.5	29	7.5	3	1.875
Non-integrated	25.0	18	69.4	50	5.6	4	1.806
(e) Tell Indian stories or myths.							
Integrated	32.5	13	60.0	24	7.5	3	1.750
Non-integrated	22.2	16	62.5	45	15.3	11	1.931
(f) Make Indian arts and crafts.							
Integrated	52.5	21	40.0	16	7.5	3	1.550
Non-integrated	36.1	26	55.6	40	8.3	6	1.722
2. In leadership, how much do Indian people do the following?							
(a) Respect the chief and his council.							
Integrated	56.4	22	43.6	17	0.0	0	1.436
Non-integrated	56.9	41	41.7	30	1.4	1	1.444



Table VIII (continued)

	<u>Quite a Lot</u>		<u>Some</u>		<u>Not at All</u>		$\bar{X}$		
	%	No.	%	No.	%	No.			
(b) Respect the idea of cooperating with band managers.									
Integrated	45.0	18	50.0	20	5.0	2	1.600		
Non-integrated	39.4	28	56.3	40	4.2	3	1.648		
(c) Respect people who give them leadership and advice.									
Integrated	46.2	18	48.7	19	5.1	2	1.590		
Non-integrated	38.6	27	60.0	42	1.4	1	1.629		
3. How do the Indian people feel about their children? Do they want them to:									
	<u>Be Indian</u>		<u>Be Like White Men</u>		<u>Be Able to Act and Work in Both Indian and Non-Indian Worlds</u>		$\bar{X}$		
	%	No.	%	No.	%	No.			
Integrated	35.0	14	5.0	2	60.0	24	2.250		
Non-integrated	23.9	17	7.0	5	69.0	49	2.451		
4. How much education do Indian parents want their children to have?									
	<u>Grade School</u>		<u>High School</u>		<u>Vocational School</u>		<u>College or University</u>		$\bar{X}$
	%	No.	%	No.	%	No.	%	No.	
Integrated	10.3	4	30.8	12	0.0	0	59.0	23	3.077
Non-integrated	5.6	4	23.9	17	2.8	2	67.6	48	3.324
5. What do Indian people think the university can do for them?									
	<u>Help Them To Train Leaders</u>		<u>Help Them to Understand Their Problems</u>		<u>Help Them To Keep Their Languages</u>		<u>Help Them To Educate The Young People</u>		$\bar{X}$
	%	No.	%	No.	%	No.	%	No.	
Integrated	7.7	3	51.3	20	2.6	1	38.5	15	2.718
Non-integrated	7.8	5	15.6	10	3.1	2	73.4	47	3.422

pupils enrolled there might actually find more emphasis on native peoples than children in all-Indian schools. The same phenomenon may be observed with reference to the third question dealing with what Indian parents may wish for their children, i.e. "be Indian", etc. Integrated pupils selected the idea of "being Indian" 11.1% more than non-integrated pupils. This difference was made up by non-integrated pupils selecting "Be able to act and work in both Indian and non-Indian worlds," 9.0% more.

The fourth question dealt with the amount of education required by Indian people today. Integrated children selected grade school and high school in larger amounts than did pupils attending non-integrated schools. Vocational education as a choice was selected by only 2.8% (2 persons) of non-integrated pupils and not at all by those in integrated schools. By comparison, non-integrated pupils selected college or university in an amount 6.8% higher. Since no test of significance was undertaken, it is difficult to interpret accurately what these statistics indicate. The fact that Indian children in non-integrated schools selected university to a higher extent supports other findings indicating the extent to which Indian people are looking to higher education as a means of transforming the existing Indian way of life.<sup>33</sup>

Higher education was specifically treated in the fifth query and respondents were asked to indicate what they felt the university could do for the Indian community. Two of the responses demonstrate interesting results; integrated pupils selected "help them to understand their problems" 44.3% higher, and non-integrated pupils selected "help

them to educate their young people" 34.9% higher. The other responses emitted no noticeable differences. The selection by the non-integrated pupils of higher education and the university as a means of educating young people further reflects Indian aspirations for education. Integrated pupils, on the other hand, perhaps reflect their own curriculum when they indicate that education possibly will help Indian people to understand their problems. There may be a tendency to regard this response as more insightful than the others, for indeed, if education is to achieve anything at all it should diminish unfortunate situations unless this is what is implied in educating young people as such.<sup>34</sup>

The differences expressed by pupils in the two school situations do tend to indicate that concepts of education are variant, and though the differences are quite small, statistically speaking, they do demonstrate that school environments are capable of producing remarkably significant and particularized patterns of valuing.

The concepts of teachers involved in this study--"experimental" and "control"--were also matched. The differences involved, however, were so slight that tabulations were not considered significant enough to be included here.

The major portion of this part of the study comprised a comparison of four major groups of people and their responses to the questions posed: Indian parents, teachers of Indian children, Indian pupils, and non-Indian pupils. Table IX delineates a break-down of the responses.

It is hazardous to generalize on the basis of the statistical data available, but a single thread runs strongly through the various tabulated responses--that Indian ways are still a very real entity in the

Table IX

Concepts of Indian Culture: Indian Parents,  
Teachers, Indian Children and Non-Indian Children

	<u>Quite a Lot</u>		<u>Some</u>		<u>Not at All</u>		$\bar{X}$
	%	No.	%	No.	%	No.	
1. How much do you think Indian people still like to do the following:							
(a) Act in ways toward helping other people.							
Parents	57.5	23	37.5	15	5.0	2	1.475
Teachers	48.0	12	52.0	13	0.0	0	1.513
Indian Children	36.6	41	62.5	70	.9	1	1.646
Non-Indian Children	37.2	131	58.0	204	4.8	17	1.676
(b) Take part in Indian dances and ceremonies.							
Parents	27.5	11	67.5	27	5.0	2	1.775
Teachers	16.0	4	80.0	20	4.0	1	1.885
Indian Children	43.8	49	47.3	53	8.9	10	1.643
Non-Indian Children	23.4	82	55.3	194	21.4	75	1.980
(c) Talk the Indian language.							
Parents	82.5	33	17.5	7	0.0	0	1.175
Teachers	84.0	21	16.0	4	0.0	0	1.254
Indian Children	76.8	86	18.8	21	4.5	5	1.652
Non-Indian Children	57.0	200	30.8	108	12.3	43	1.553
(d) Take part in activities and ceremonies of societies.							
Parents	25.0	10	67.5	27	7.5	3	1.825
Teachers	16.0	4	76.0	19	8.0	2	1.926
Indian Children	23.2	26	70.5	79	6.3	7	1.277
Non-Indian Children	22.5	79	63.0	221	14.5	51	1.920
(e) Tell Indian stories or myths.							
Parents	17.5	7	72.5	29	10.0	4	1.925
Teachers	12.0	3	84.0	21	4.0	1	1.917
Indian children	25.9	29	61.6	69	12.5	14	1.830
Non-Indian children	22.6	79	55.9	195	21.2	74	1.991

Table IX (continued)

	<u>Quite a Lot</u>		<u>Some</u>		<u>Not at All</u>		$\bar{X}$
	%	No.	%	No.	%	No.	
(f) Make Indian arts and crafts.							
Parents	35.0	14	60.0	24	5.0	2	1.700
Teachers	32.0	8	68.0	17	0.0	0	1.688
Indian Children	42.0	47	50.0	56	8.0	9	1.866
Non-Indian Children	43.8	154	48.3	170	7.7	27	1.645
2. In leadership, how much do Indian people do the following?							
(a) Respect the chief and his council.							
Parents	23.1	9	69.2	27	7.7	3	1.846
Teachers	52.0	13	48.0	12	0.0	0	1.474
Indian Children	56.8	69	42.3	47	0.9	1	1.661
Non-Indian Children	50.4	177	43.9	154	5.7	20	1.553
(b) Respect the idea of cooperating with band managers.							
Parents	25.6	10	69.2	27	5.1	2	1.795
Teachers	16.0	4	80.0	20	0.0	0	1.833
Indian Children	41.4	46	54.1	60	4.5	5	1.441
Non-Indian Children	27.8	97	61.9	216	10.3	36	1.825
(c) Respect people who give them leadership and advice.							
Parents	45.0	18	52.5	21	2.5	1	1.575
Teachers	24.0	6	72.0	18	0.0	0	1.750
Indian Children	41.3	45	56.0	61	2.8	3	1.631
Non-Indian Children	40.9	142	52.4	182	6.6	23	1.657
3. How do the Indian people feel about their children? Do they want them to:							
	<u>Be Indian</u>		<u>Be Like White Men</u>		<u>Be Able to Act and Work in Both Indian and Non-Indian Worlds</u>		$\bar{X}$
	%	No.	%	No.	%	No.	
Parents	10.5	4	2.6	1	84.2	32	2.789
Teachers	32.0	8	0.0	0	60.0	15	2.296
Indian Children	27.9	31	6.3	7	65.8	73	1.615
Non-Indian Children	23.8	82	4.9	17	70.6	243	2.480

Table IX (continued)

	<u>Grade School</u>		<u>High School</u>		<u>Vocational School</u>		<u>College or University</u>		$\bar{X}$
	%	No.	%	No.	%	No.	%	No.	
4. How much education do Indian parents want their children to have?									
Parents	0.0	0	5.1	2	5.1	2	89.7	35	3.846
Teachers	16.0	4	40.0	10	28.0	7	4.0	1	2.228
Indian Children	7.3	8	26.4	29	1.8	2	64.5	71	2.378
Non-Indian Children	19.6	68	34.9	121	9.5	33	36.0	125	2.620
5. What do Indian people think the university can do for them?									
	<u>Help Them To Train Leaders</u>		<u>Help Them to Understand Their Problems</u>		<u>Help Them To Keep Their Languages</u>		<u>Help Them To Educate The Young People</u>		$\bar{X}$
	%	No.	%	No.	%	No.	%	No.	
Parents	14.7	5	14.7	5	0.0	0	76.6	24	3.265
Teachers	7.3	8	26.4	29	1.8	2	64.5	71	2.549
Indian Children	7.8	8	29.1	30	2.9	3	60.2	62	3.155
Non-Indian Children	8.3	26	33.2	104	3.8	12	54.6	171	3.048



thinking of all four groups. Perhaps a more meaningful summary might be provided if the responses of the individual groups are discussed, leaving comparisons to a reading of Table IX itself. The first two questions lend themselves to a combined treatment.

Indian parents most strongly prefer the helping aspect of Indian life and preference for speaking the Indian language. There was not a particularly significant selection of the "not at all" category.

Teachers endorsed only two items strongly: 84% selected "speaking the Indian language", and 52% selected "respect for the chief". Also, the teachers displayed the smallest number of preferences for the "not at all" column with five items receiving no responses at all.

Indian pupils as well selected only two items with a majority of responses, the same as those selected by the teachers. The "not at all" column again received only a few choices.

Non-Indian children expressed in the largest number choice for the "not at all" column; an indication, perhaps, of their lack of acquaintance with Indian ways, or perhaps even a manifestation of the kind of influences the school and its materials might have for them. Once again, majority preferences could be tabulated with regard to the two items previously referred to by Indian children and teachers.

Question Three demonstrates a very similar curve of choices for all groups with the majority for all of them expressed for the column, "Be able to act and work in both Indian and non-Indian worlds."

The question pertaining to education received a variety of responses, with significant numbers of three groups expressing some preference for college or university education--teachers alone tended to

select equally among high school and vocational education. This group also expressed the largest number of choices for grade school education.

The role of the university was perceived by the four groups in question with particular regard to "helping them educate their young people" and fairly evenly as a second choice, "help them to understand their problems". The notion of training leadership and maintaining Indian languages was selected by only a small number of individuals.

The results of this aspect of the study indicates a worthwhile endeavour in that a pattern of conceptualizations emerged regarding Indian culture which indicates some provocative alternatives for further preparation and implementation of Indian policies. The recommendations represent a few of the more salient characteristics of the four groups of people, forming a fairly well synthesized pattern of perception.

### SECTION THREE

#### AN EVALUATION OF A COURSE FOR TEACHERS IN INDIAN EDUCATION

One phase of the Teacher Perception Study included a specially arranged university course for teachers involved in Indian education. Held during the 1968-69 university year, the course was appropriately labelled, "Course for Teachers in Indian Education", and students met on Saturday mornings throughout the year, for several hours at a time. Half of the teachers invited to take the course, which was available for credit, were individuals who were not in any other way involved with the research being carried out under the terms of contract, and the other half were individuals involved specifically in the teacher perception study. This arrangement enabled some kind of comparison to be made between students of an "experimental" group and a "control" group. Approximately sixteen enrollees finished the course which was offered under the auspices of the Department of Educational Foundations at the University and numbered as Section 3, Educational Foundations 413, and Section 2, Educational Foundations 415, both Sociology of Education half-courses.

#### Nature of the Course

The basic intent of the course was to acquaint teachers working in integrated school situations (and in situations involving only Indian pupils), with factors sometimes responsible for disparity and discontinuity in those situations, and through mutual sharing of ideas and experiences to develop an effective and workable concept of learning in such cultural settings. The course also provided a factor to be studied in comparing experimental and control groups; the classroom of the teacher

enrolled in this course was considered separately from that of other teachers.

In order to provide as wide a base as possible for knowledges and viewpoints as they exist in the various agencies and organizations involved in Indian situations, a wide spectrum of personnel was employed in the teaching of the course. These included Indian Affairs personnel, Indian people, and academicians from the fields of history, psychology, sociology, social welfare, philosophy, and school administration. The danger of disparity and even lack of continuity, such as might be the case with a variety of lecturers and discussants, was not given too serious consideration because as a factor it seemed to be subjected to an even more important purpose -- that of furnishing as authentic and reliable an expertise as possible.

Topics treated during the process of the course and their academic orientation included the following:

- 1/ Contributions of Native Cultures to the World Today (Historical approach).
- 2/ The Varying Values of Pupils from Differing Cultural Backgrounds (2 sessions) -- Sociology and Psychology.
- 3/ Personal Values of Teachers as they Function in the Integrated Classroom (2 sessions) -- Educational Administration and Educational Philosophy.
- 4/ Development of Improved Pupil Perceptions and Attitudes re Social Relationships -- Educational Psychology.
- 5/ One's Purpose as a Contributing Member of Society -- Self-image (2 sessions) -- Social Welfare and Educational Psychology.
- 6/ Attitude Formation and Change -- Educational Psychology.

- 7/ The Nature of Personal Conflict Patterns in Marginal Situations.
- 8/ The Cultural Milieu and its Relationship to Learning and Achievement (2 sessions) -- Indian Affairs and Sociology.
- 9/ Functional Relations of People in Societal Structure. (2 sessions) -- Sociology of Education and Educational Psychology.
- 10/ A Relevant Ideology Regarding Learning in Integrated Situations. -- Indian Affairs.

The objectives for the course were developed in several ways, basically comprising a consultation with individuals concerned -- the teachers, Indian people, Indian Affairs personnel, and university faculty involved in the research. In general, the objectives were developed in the form of topics for discussion, i.e. to delineate the role of values of both teacher and pupil in the learning situation, to observe and study attitude formation and change, and to study the relationship of particular societal structures to integrated educational situations with the hope of deriving a relevant and meaningful ideology from the same.

In a specific way, the objectives for the course were drawn up from within the frame of reference established by these guidelines:

- 1/ It needs to be underscored that research and study in the area of Indian culture and education falls within the realm of intercultural relations. Interactions between the people involved in such activity will be, to a certain extent, modified and affected by social and cultural factors including: background in terms of natural and community habitat, familial patterns and relations, and group and social structure. Care will need to be exercised in the sense that respect for the term "cultural sensitivity" will be shown with regard to all proceedings.

- 2/ Values are not easily defined but they are part and parcel of every human group, and determine to a large extent behaviors that are exhibited. When close relations are developed, such as is the case in human meetings stemming from research and study, respect must be demonstrated for individual preferences, opinions and concerns. When undue infringement on another person's rights occurs it is more than lamentable, it is moral violation. Further, it should be borne in mind that value-orientations are not always explicit -- their ontological meaning may emit a veiled understanding to those who seek to understand another's position. We should be hesitant in taking a stand that suggests that we have deciphered fully another's preferences and appreciations.
- 3/ Human beings of any culture and subculture manifest a variety of tendencies and characteristics and it is not always an easy task to discover whether particular behaviors are motivated by social, mental or other factors. The term "individual identity" is more than jargon; it implies that impressions and reactions to any specific issue or situation vary with each person, and that allowance and recognition of this be made. Seminars in which activities and experiences of individuals are discussed and analyzed must remain open with regard to the advocacy or recommendation of specific courses of action unless those individuals are consulted and their desires have been taken into account.

Further activity and attitude-oriented objectives were furnished on two occasions by teachers involved. The first group delineated their expectations along these lines:

- 1/ They were interested in practical issues which could help them with their work, not just in lectures.
- 2/ They needed answers to problems with Indian pupils such as:
  - a) Seeming inability to do or respond to homework assignments.
  - b) Inability to follow directions.
  - c) Lack of respect for time, e.g. scheduling.
  - d) Tendency to respond to motivation which deals with "cooperation" but not with "competitiveness."
  - e) Greater achievement as a result of rote methodology in learning.



- f) Inability to respect property.
- g) Orientation to the "present" with little regard for the "future."
- h) Lack of understanding or interest in economy or saving in money practices.
- i) Feelings of alientation.
- j) Lack of esteem for leadership roles which they deem "Conspicuous."
- k) Negative reaction to pressures.
- l) Inability to take the consequences of or responsibilities connected with their decisions.
- m) Withdrawal tendencies.
- n) Lack of parent cooperation with or support for learning.
- o) Language barriers.
- p) Inability to adapt to boarding home situations in town.
- q) Seemingly negative response to the three basic "A's" of learning, i.e. (1) Achievement; (2) Approval; (3) Acceptance.

A second group of teachers described their preferences in terms of course objectives in this way:

- 1/       Theoretical understandings of Indian education, particularly:
- a) Sociological terms, i.e. assimilation, acculturation, integration.
  - b) Suitability of present curricula for Indian students.
  - c) Success of present integrated programs (qualitatively).
  - d) Philosophical exploitation of what education is and what it aims to produce for the Indian.
  - e) Crime rate and academic success (25 and under group).
  - f) Theory behind "drop-outs" of Indians.
  - g) Hypothesis re how Indians may meet with whites on equal terms in Education.
  - h) Reserve schools vs. schooling in nearby towns and cities.

2/       "Practical" understandings regarding Indian education:

- a) The Indian attitude (if any) toward Education as indicated by response of students, i.e. negative

attitudes, rarity of personal desire for success, differences in value standards compared with the child in public school.

- b) The Public School attitude toward education of Indian children, i.e. motives, methods, assessment of results of integration policy up to present time.
- c) The practicality of Indian children being taught by Indian teachers.
- d) Integration of white children into super-equipped Indian schools in the Indian environment.
- e) Assistance available, i.e. programs, special equipment, small classes, specially trained teachers for the academically slow child.
- f) Opportunities (if any) for broadening the child's background, i.e. trips within the community, trips to other cities, well-equipped libraries, current films and movies.
- g) Effects of special opportunities (see 2.f) upon children and achievement.
- h) Use of a "dialogue" methodology in the course (see Theoretical and Practical Understandings).
- i) Review of programs implemented in the U.S.A. and relevant research.
- j) Understandings of Federal monies spent on joint schools and Indian schools.

Throughout the course definite consideration was given to these teacher needs. Copies of the various lists of objectives were made available to all who were involved in the research, lectures and seminars.

#### Evaluation of the Course

A subjective evaluation of the course sessions was requested of those who took the course in order that:

- 1/ Perceptions and attitudes of teachers towards particular phenomena in the area of Indian education in an informal discussion could be tabulated in a general way.

- 2/ Any change in perception as expressed by the teachers could be noted and an attempt made to discover the reason for that change.
- 3/ Topics selected by teachers for reaction could be pursued by means of further exploratory research.
- 4/ The subjective methodology of this evaluation could furnish teachers with an opportunity to express themselves as they saw fit, thus providing a more representative concept of their actual impressions and frames of reference. Further, it allowed experimentation with an affective kind of instrument in contrast to the parametric devices utilized in other parts of the Teacher Perception Study.

Participants were not asked to provide any particular structure in these reports, but rather seek to reflect their own opinions as much as possible. The reports were to be one-half to a full page in length, and were to be handed in as soon after each class period as possible, one for each class session. Respondents were asked only to furnish specifically on each report, their identification number, the date or title of the lecture or enough information about it to properly identify it, and their reaction to anything that transpired at the class period in question.

The reaction reports were carefully perused by two readers and comparisons made regarding their appraisal; in addition, any discrepancies and disagreements were synthesized by this researcher. An uncomplicated statistical tactic was employed; the reports were read and a single number, ranging from 1 to 5 attached to each specific reaction noted in each report. The numbers from 1 to 5 were used to denote the following:

1 -- very positive reaction, 2 -- positive, 3 -- neutral, 4 -- negative, and 5 -- very negative.

The following are exemplary reactions in terms of the five kinds of perception, specifically noted in relation to the topic under discussion.

very positive

"Judging from the discussions of the teachers on this staff, who teach Indian students, and my own opinion, I feel that we all have tried to be very fair with our Indian students. There is a much broader acceptance now than there was four years ago when the Indian students first came here."

"The final lecture was, in my opinion, a masterpiece. Much of what was said was harsh to the point of being embarrassing, but it was true. Much of what was iterated would serve as a reminder to teachers of what they should be doing but too often overlook. The lecture was for teachers not for people who spend time in our classrooms."

positive

"I found this session stimulating but very different from the first. I believe seminar sessions have merit in that a greater variety of views may be presented and discussed, but I feel that individuals tend to bring up topics that are irrelevant to the subject, taking time that could have been used to better advantage. We are all assimilated by technology. This was the crux of the material presented by \_\_\_\_\_. After having read "The Pre-neolithic Ethic -- Avenue or Barrier to Assimilation," one realizes the complexity of this subject."

"I felt that the particular value of [the] address lay in the parallel he drew between life experiences and the attitudes towards the various groups; and the importance of realizing that the Indian, like ourselves, is a product of his particular environment. . . . To my way of thinking, there must be some alternative to the wholesale destruction of a great culture by total assimilation, just as there must be some alternative to the present unsatisfactory situation."

neutral

"The professor stated at the beginning of his lecture that Indians should move off the reserve. Presumably this was to be the resolution part of the topic. However, he did not explain to my satisfaction anyway, how this would solve any problems."

"I found the lecture of interest in a general way but failed to establish the feeling that it directed us in the right direction as far as our problem is concerned. Perhaps it is my feeling that our problem is not so much one of teaching methods in the present situation as one of establishing what we are teaching for and why."

negative

"I'm sorry to say that after many weeks in these sessions I cannot see that anything concrete has been established or accomplished or that the theory presented can really help the teacher of Indian students. I am simply more deeply committed than ever to the philosophy that Indian people can be led ahead while maintaining many facets of their own culture, and that neither cultural assimilation nor total school integration has the answer to the so-called "Indian Problem."

"I fail to see how an understanding of this culture in a special situation type-thing would give a person advantageous insight to our Indian situation....I am not of the opinion that an understanding of foreign cultures is a basis for establishing a plan of action to motivate our Canadian Indians."

very negative

"This was no panel discussion, it was a 'holy inquisition.' The inquisitors sat around in a great council circle presenting a very formidable front and vehement questions while the two white 'counsellors' directed the correct answers; even the spirit world was represented in the form of that great deity - the T.V. camera, recording events for posterity. Therefore, all that was said was to please the ears of the great council and they in turn nodded their heads or grunted in authoritative approval. To what end this charade? Has it not been seen too many times before in history?"

"....the lecture was confusing....There seemed to be some doubt in my mind as to the validity of some of the 'theory' presented. This was especially so when I attempted to apply it against the Indian population. Perhaps it would have been more meaningful if there could have been a little more information on the concept of marginal people. This was the first time I thought the one hundred and forty miles trip was a waste of time."

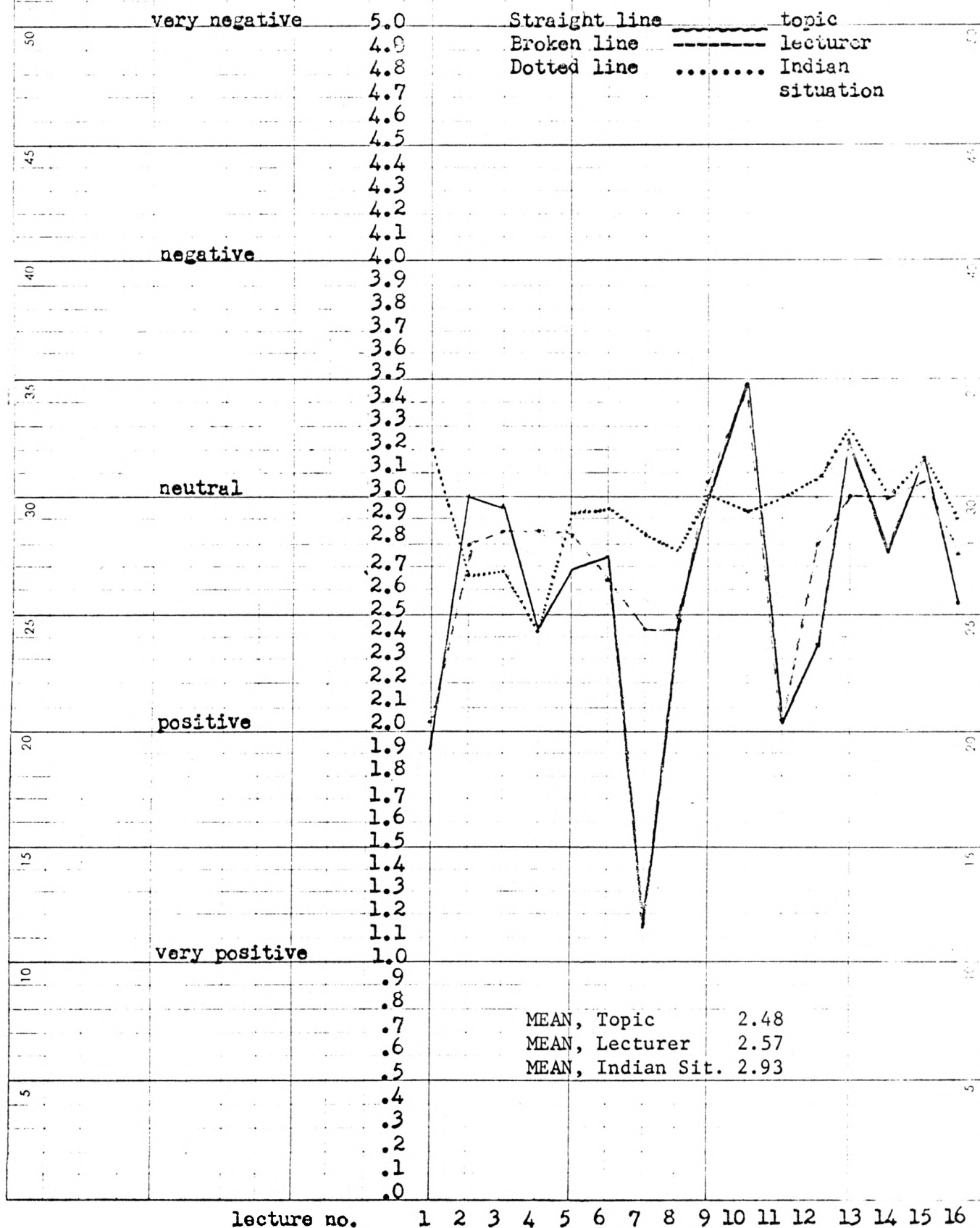
Although these statements are taken from a variety of lectures, their essence can readily be distinguishable in terms of the characteristic ascribed to it.

The statistical format of the evaluation is entirely uncomplicated. Only the summed averages of the responses are shown, basically in keeping with the intended subjectivity of the research. Three tables have been devised, each indicating a different kind of combination of the responses. Table X indicates in graphic form the average of the group in terms of their reactions to three concepts pertaining to the course: 1) the topic



TABLE X  
Averaged Group Reactions  
to Three Factors re  
Lectures.

1.0 - very positive  
2.0 - positive  
3.0 - neutral  
4.0 - negative  
5.0 - very negative





under consideration and its relevance to their situation, 2) the nature of the presentation by the lecturer (or seminar leader), and the general circumstances regarding the Indian education situation. The computations were made for students who completed reaction reports for a minimum of ten class sessions.

In order to draw meaningful observations and conclusions from the information on the tables, the following breakdown of lecture topics and dates is given.

LECTURE NO.	DATE	TOPIC
I	November 2	Contributions of native cultures to the world today.
II	November 9	The varying values of pupils from differing cultural backgrounds.
III	November 16	Same topic.
IV	November 23	Personal values of teachers as they function in the integrated classroom.
V	November 30	Same topic.
VI	December 7	Development of improved pupil perceptions and attitudes re social relationships.
VII	January 4	One's purpose as a contributing member of Society -- self-image.
VIII	January 18	Same topic.
IX	January 25	Attitude formation and change.
X	February 8	The nature of personal conflict patterns and their resolution (marginality).
XI	February 15	Same topic.

LECTURE NO.	DATE	TOPIC
XII	March 1	The cultural milieu and its relationship to learning and achievement.
XIII	March 8	Same topic.
XIV	March 15	Functional relations of people in societal structure.
XV	March 29	Same topic.
XVI	April 12	A relevant ideology regarding learning in integrated situations.

Table X indicates a wide range of combined averages for the three concepts, especially in relation to the topic under discussion. It is notable that the majority of lectures in terms of all three concepts were classified more positively than negatively. Twelve lecture topics, eleven lecturers, and eleven conceptualizations regarding the Indian education situation were delineated as more positive than negative. The subjectivity of this experiment is further validated in noting that three of the lectures were averaged as quite negative, yet the topic treated in each case was the same as another parallel session which was rated quite positively. It is apparent that the elements responsible for such inconsistency are not easily identified; therefore, the summed averages would be the best indicator of what might be "the true concept."

A degree of consistency seems apparent from the graph which indicates via the dotted line; student reaction to the Indian education situation as presented in each of the sessions. Although reactions to other phenomena were not tabulated due to variation in themes stressed in the course, therefore not affording a sufficient number of responses

for tabulation, these too were similarly delineated. In general, appreciation for the opportunity to discuss and consider various problems akin to teaching was expressed in culturally-specified (non-integrated) and integrated school situations. The clustering of reactions around particular lectures despite the differing nature of the three concepts indicates a degree of consensus regarding each lecture.

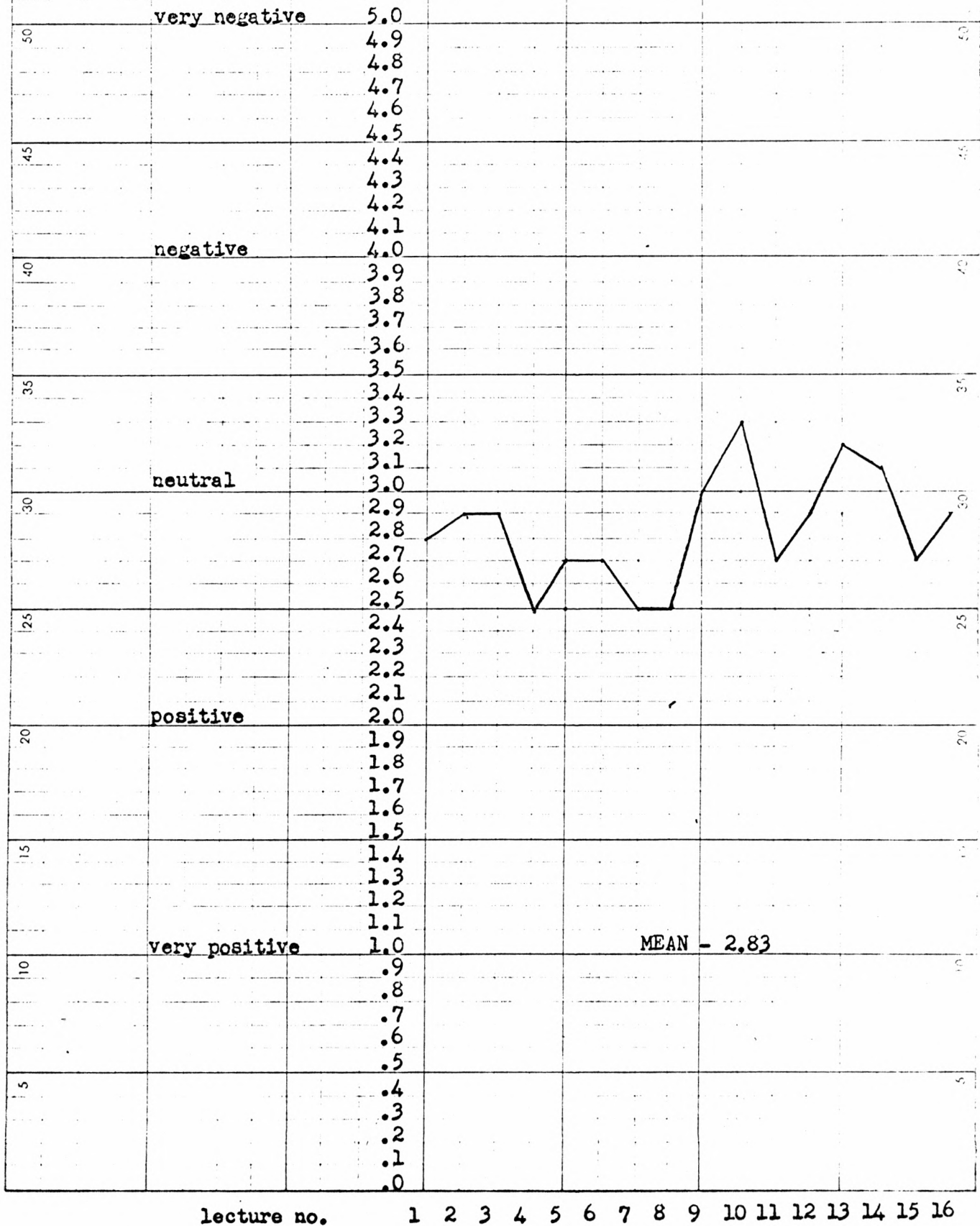
Table XI shows the average response figures for the group in terms of all reactions of course participants including the three concepts indicated in Table X: reaction to lecture, lecturer, and the Indian education situation. Three of the lectures were reacted to negatively, in average terms, while twelve were positively rated. There are also indications that the course was more positively evaluated nearer the beginning than it was during the latter half. Reasons for this might be difficult to determine but there did seem to be some indication that the course could have weighed more heavily as a responsibility toward the end in that most of the teachers drove a considerable distance to attend class. Also, in light of expectations regarding what the course was intended to do, the level of dissatisfaction appeared to be higher near the finishing lectures of the course. The final two sessions, however, indicated a distinct positive note as they seemed to be indicative of an evaluation of the entire course rather than specific lectures. The last lecture, of course, was intended to take the form of a "wrap-up."

A glance at the objectives of the course indicate a significant discrepancy between those objectives established by teachers and guidelines formulated by the researchers. The former are definitely action-oriented, that is, the teachers were expecting to receive hints and researched suggestions as to how to teach more successfully in culturally-influenced

TABLE XI

Lecture profile:  
Averaged responses of  
the group for each session.  
(multiple factors)

1.0 - very positive  
2.0 - positive  
3.0 - neutral  
4.0 - negative  
5.0 - very negative



situations, while academicians involved tended more toward a theoretical emphasis. This was based on the assumption that practical maneuvers can successfully be originated only when sensitivities and conceptualizations based on concrete understandings are actualized. This was probably the only distinction between teachers' and researchers' objectives, but an important one.

Table XII is a graphic illustration of the individual profiles of the course enrollees. In order to provide as complete a tabulation as possible, all reactions of each individual who had turned in at least 50% of his reaction reports were tabulated. In some cases this turned out to be as many as seven or eight single reactions ranging from 1 to 5 depending on the choice of item for reaction. (Appendix D indicates the manner in which the averages for Table XII were computed.)

The individual compilations of Table XII indicate that, though the average (arithmetical mean) for the whole group for all lectures is 2.76, a positively inclined figure, two individuals who averaged negative compilations, severely affected the profile as a whole.



TABLE XII

Averaged reactions for individual students identified by numbers.  
Tabulated only for those attending 50%.

1.0 - very positive  
2.0 - positive  
3.0 - neutral  
4.0 - negative  
5.0 - very negative

very negative 5.0

4.9

4.8

4.7

4.6

4.5

4.4

4.3

4.2

4.1

negative 4.0

3.9

3.8

3.7

3.6

3.5

3.4

3.3

3.2

neutral 3.0

3.1

2.9

2.8

2.7

2.6

2.5

2.4

2.3

2.2

positive 2.0

2.1

1.9

1.8

1.7

1.6

1.5

1.4

1.3

1.2

1.1

very positive 1.0

.9

.8

.7

.6

.5

.4

.3

.2

.1

.0

MEAN - 2.76  
(multiple factors)

Student No.

1 2 3 4 5 7 8 9 10 11 12 14 15 16 17 19 21 24 29 30



Observations on the 1969-70 term

During the 1969-70 school term the experimental "Course for Teachers in Indian Education" was conducted as a regular offering of the University of Calgary through the Educational Foundations Department. Divided into two terms, the descriptions are as follows:

INTERCULTURAL BASES OF EDUCATION I  
Ed. Fdn. 419 (3-0, 0-0)

Prerequisite: Sociology 202 or Ed. Fdn. 413 or consent of department.

Study of intercultural social theory concepts  
and the education process.

Conceptions of intercultural social theory will be applied to the education process. Value orientations and behavioral norms of teachers and pupils will be considered in regard to such topics as cultural heritage and the ability to deal with others; preservation of cultural identity and assimilation; cultural sensitivity and cultural lag; and the problems of intercultural mobility in relation to the institutions of the broader society.

Practical study considerations will be given to field observations and research so that students may gain a realization of how values, mores, and actions of such pupils operate with those of the teacher(s) in integrated and culturally homogeneous classrooms and schools.

INTERCULTURAL BASES OF EDUCATION II  
Ed. Fdn. 421 (0-0, 0-3)

Prerequisite: Ed. Fdn. 419

Field study of intercultural social systems  
in the education process

Education of pupils from varying cultures will be studied in terms of the social systems in the education process. Emphases will include study of teacher-learner roles, interactions, and socio-learning structural networks. Parent-learner considerations as impingements upon the socio-learning process, and the school and its relations with the home will be considered.

Fourteen students were enrolled in the course which again was conducted on Saturday mornings throughout the year. Some changes were made in the course objectives and outline on the basis of the previous year's assessment and personnel suggestions, and because of the definite "field" emphasis of the second part of the course. For the purposes of this discussion it might be noted that the terms of reference for the course, philosophical guidelines, and university personnel were basically those used during the 1968-69 school year.

Daily reaction reports were again required of the students and these were classified in terms of five possibilities: very positive, positive, neutral, negative, and very negative. A graduate student reader was assigned the task of categorizing these responses and, when there was a question regarding the nature of a given response, a second reader was asked to give a rating. A copy of the Reaction Report Assignment is included in the appendices of this report and provides a general impression of the task students were asked to perform.

The graphic tables, Nos. XIII, XIV, and XV denote student responses in several ways. Table XIII is a compilation of averaged student responses to several phenomena in the sessions, namely, the topic, the lecturer, and the Indian situation, and because there was an emphasis in the course this year on resolving particular Indian educational dilemmas, this was also tabulated. The arithmetical averages indicate that the factors were positively viewed with the exception that the "Indian educational situation" was viewed a little less positively, the mean being 3.01.

TABLE XIII

Averaged group reactions  
to three factors re  
lectures.

1.0 - very positive  
2.0 - positive  
3.0 - neutral  
4.0 - negative  
5.0 - very negative

Straight line ——— topic  
Broken line - - - - - lecturer  
Dotted line ..... Indian  
Dot - Dash .-.-. situation  
solution

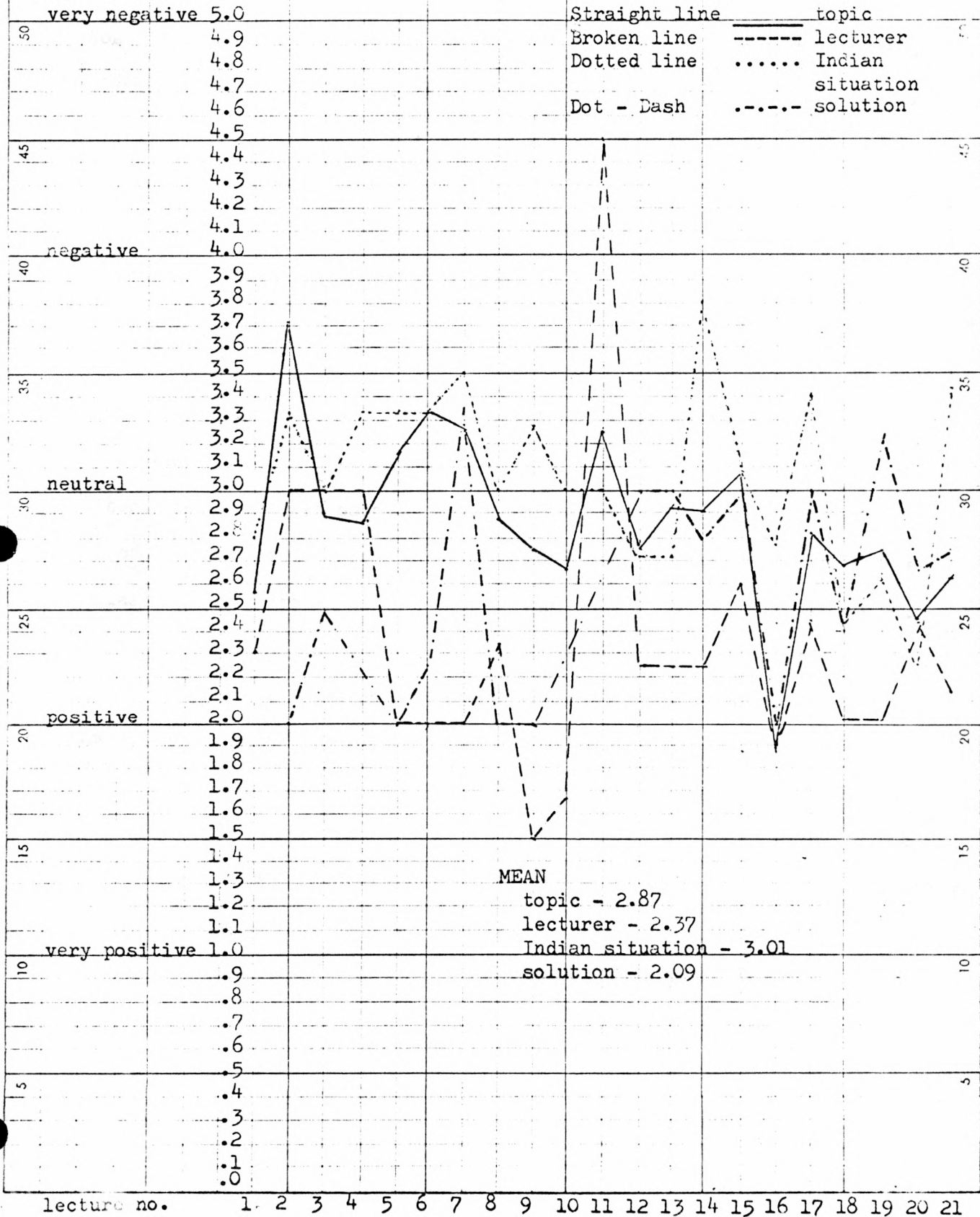


Table XIV shows the averages of the responses to various aspects of each of the lectures in the series. In contrasting this table with the same evaluation of the previous year the average for all of the sessions is a bit higher, 2.78 as compared with 2.83.

Table XV reveals the break-down of responses for each of the students involved in the course. None of these individuals in the 1969-70 session were the same as those of the previous year so no such comparisons can be made. During each of the school terms it may be noted that there were two individuals whose reactions averaged negatively; and during both terms the overall average was positive, 2.76 in the 1968-69 term and 2.71 (slightly more positive) during the 1969-70 term.

Recommendations regarding the course evaluation are submitted at the beginning of this report.



TABLE XIV  
LECTURE PROFILE:

Averaged responses of the group  
for each session. (multiple  
factors.)

1.0 - very positive  
2.0 - positive  
3.0 - neutral  
4.0 - negative  
5.0 - very negative

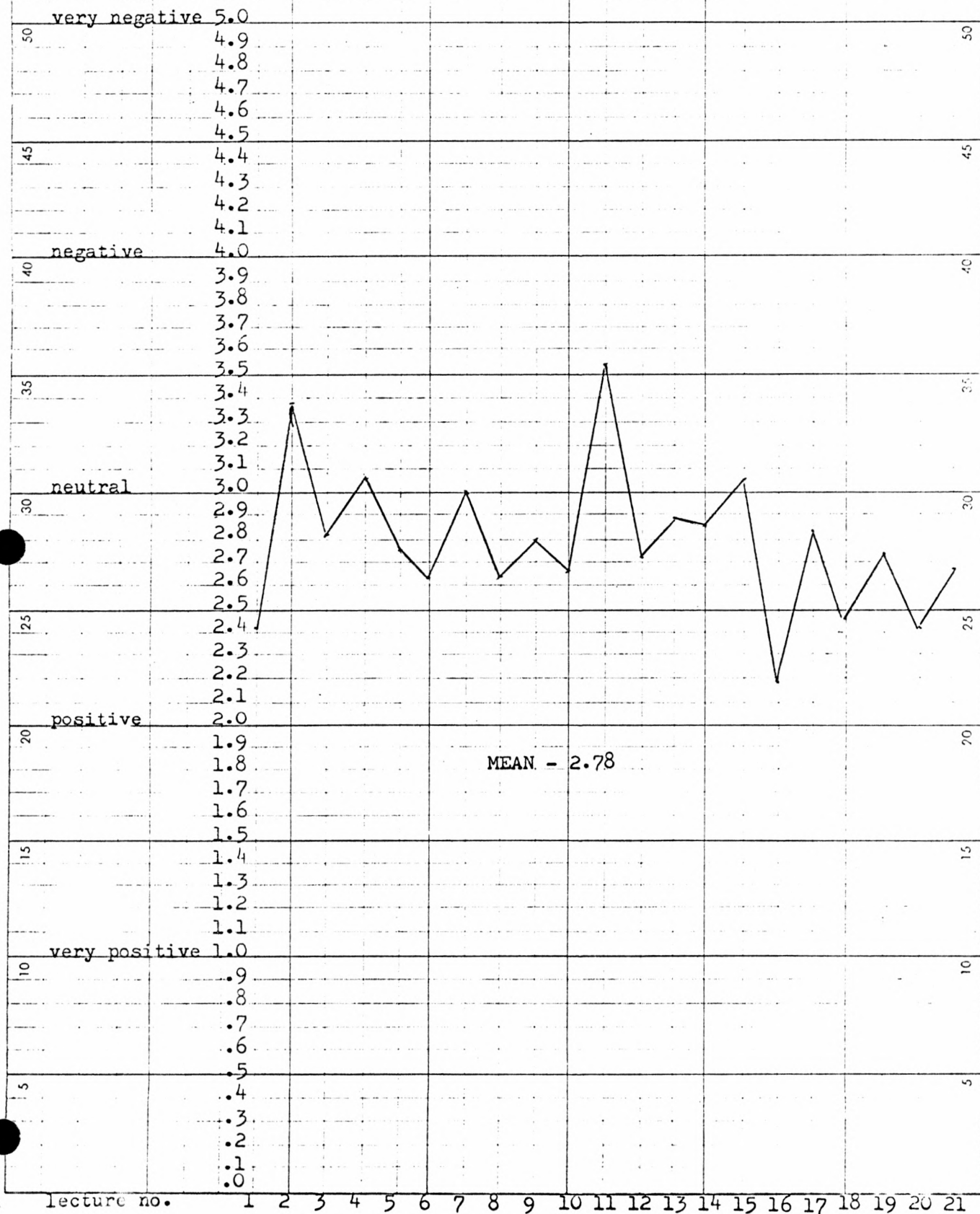
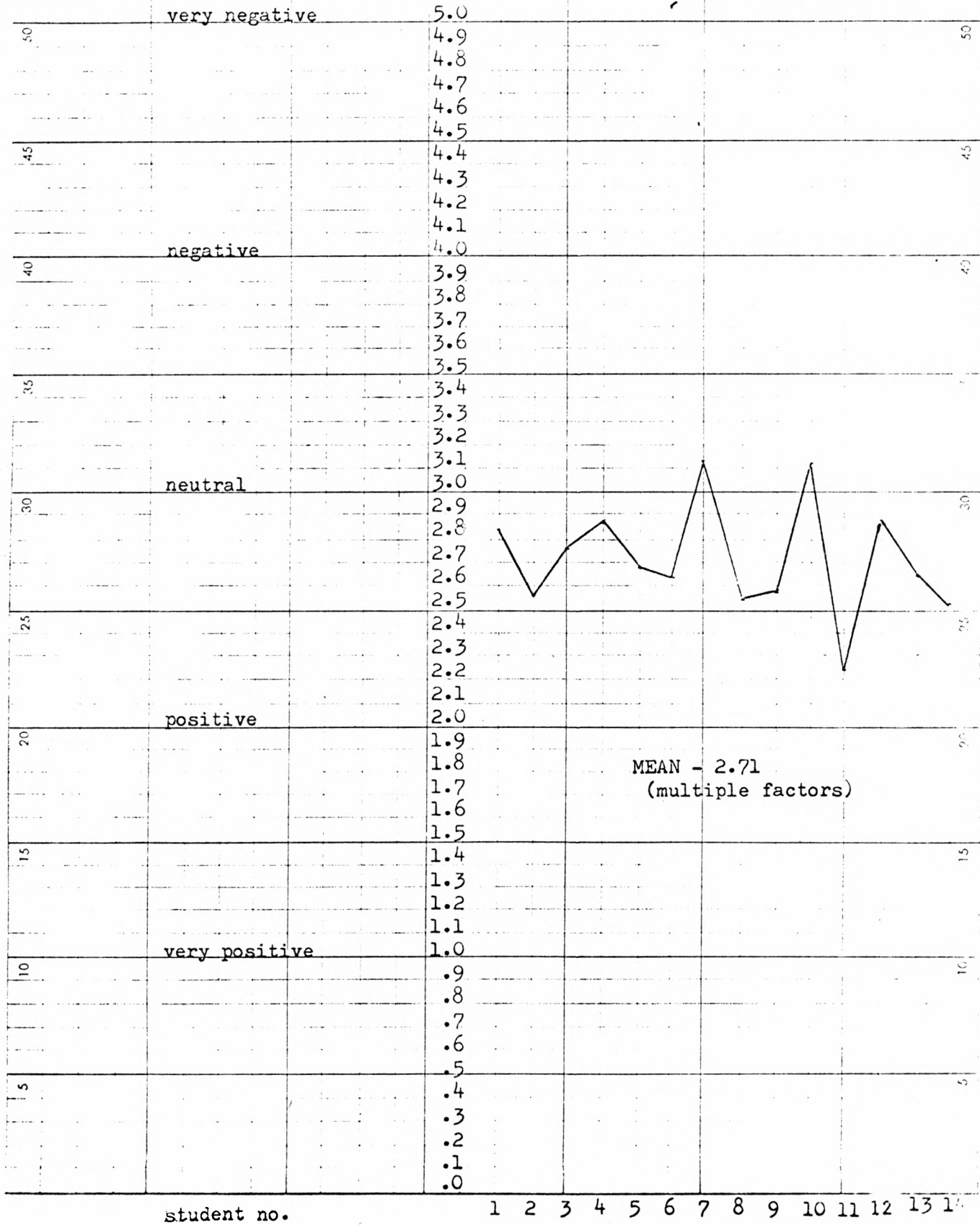


TABLE XV

Averaged reactions for individual students identified by numbers.  
Tabulated only for those attending 50%.

1.0 - very positive  
2.0 - positive  
3.0 - neutral  
4.0 - negative  
5.0 - very negative



student no.

1 2 3 4 5 6 7 8 9 10 11 12 13 14



## REFERENCES

## REFERENCES

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<sup>3</sup>Ibid., pp. 28-29.

<sup>4</sup>Ibid., pp. 30-32, a paraphrase.

<sup>5</sup>Williams, op. cit., pp. 403-405.

<sup>6</sup>Lowry W. Harding, "The Value-type Problemmare," The Journal of Social Psychology, Volume 10, 1944, pp. 118-119.

<sup>7</sup>Harry S. Broudy, Building a Philosophy of Education (Englewood Cliffs: Prentice Hall, 1961), pp. 140-141.

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<sup>9</sup>Florence Kluckhohn and F.L. Strodtbeck, Variations in Value-Orientations (New York: Row, Petersen, 1961).

<sup>10</sup>H.W. Kitchen, "Relationships Between the Value-Orientations of Grade Nine Pupils in Newfoundland and the Characteristics of the Primary and Secondary Groups" (unpublished Doctor's dissertation, Edmonton: The University of Alberta, 1961).

<sup>11</sup>R.S. Parry, "The Relational Value-orientations of Grade X Students and of their Fathers" (unpublished master's thesis, The University of Calgary, 1967).

<sup>12</sup>Lowry W. Harding, op. cit., p. 142

<sup>13</sup>Ibid.

<sup>14</sup>George D. Spindler, Education and Culture (New York: Holt, Rinehart & Winston, 1963), p. 142.

<sup>15</sup>Daniel Selakovich, The Schools and American Society (Waltham, Mass.: Blaisdell, 1967), pp. 16-17.

<sup>16</sup>John Martin Rich, Education of Human Values (Reading, Mass.: Addison-Wesley, 1968), p. 8.

<sup>17</sup>Ibid., p. 9.

<sup>18</sup>Milton M. Gordon, Assimilation in American Life (New York: Oxford University Press, 1964), pp. 70-71.

<sup>19</sup>A Dissertation, University of California at Los Angeles, 1967.

<sup>20</sup>Ibid., pp. xv-xvi.

<sup>21</sup>Evanston, Illinois: Row, Petersen, 1961.

<sup>22</sup>Ibid., p. 10.

<sup>23</sup>Ibid., p. 11

<sup>24</sup>Leslie R. Gue, "A Comparative Study of Value Orientations in an Alberta Community" (unpublished Doctor's dissertation, Edmonton: The University of Alberta, 1967).

<sup>25</sup>Henry G. Burger, Ethno-Pedagogy: A Manual in Cultural Sensitivity (Albuquerque, N.M.: Southwestern Educational Laboratory, 1968), pp. 225-226.

<sup>26</sup>Harry F. Wolcott, A Kwakiutl Village and School (New York: Holt, Rinehart and Winston, 1967), p. 95.

<sup>27</sup>Seymour W. Itzkoff, Cultural Pluralism and American Education (Scranton, Penn.: International Textbook Co., 1969), p. 128.

<sup>28</sup>Ibid.

<sup>29</sup>Michael Alexander, "For the Sake of Controversy: Toward the Best of Two Worlds," The Northian, Volume 6, Number 3, Summer 1969, pp. 22-23.

<sup>30</sup>The 1968 Annual Report of the Canadian Association for Indian and Eskimo Education, York Hotel, Toronto, Ontario, May 22-24, 1968, indicates trends by the Department of Indian Affairs to seek to raise the enrolment of Indian children in integrated schools. The Honorable Arthur Laing reported.

<sup>31</sup>H.B. Hawthorn (ed.), A Survey of the Contemporary Indians of Canada, Part II (Ottawa: Indian Affairs Branch, 1967), p. 87.

<sup>32</sup>Leslie R. Gue, Resume of A Comparative Study of Value Orientations in an Alberta Indian Community (Edmonton: The University of Alberta, October, 1967), p. 22.

<sup>33</sup>This same phenomenon was found by Lyon and Friesen in Southern Alberta in 1969, Culture Change and Education (New York: Research Study Program, Associated Educational Services), pp. 109 ff.

<sup>34</sup>Melling warns against the concept that education will be a panacea for Indian problems though he admits that such a set may exist among Indian people. Right to a Future (Don Mills, Ontario: Best Printing Co., 1967), p. 58.

APPENDIXES FOR PART II

APPENDIX "A". The Instrument: Part One  
Pupils' Form

THE UNIVERSITY OF CALGARY

VALUE ORIENTATION SCALE

J. W. Friesen

Child's Code No. \_\_\_\_\_ Age \_\_\_\_\_ Teacher's Code No. \_\_\_\_\_

1. In general, people can be trusted.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

2. Most people make friends because they are able to use them.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

3. When you get right down to it, people are just no good.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

4. Even when they punish the whole class, I feel that teachers are usually right.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

5. Mary works in the library. Betty, who is Mary's best friend, needs a certain book to write a report. Betty knows that many other pupils will also need the book so she asks Mary to hide it until she can come for it. Mary thinks it is wrong to do this. Do you ...

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

6. Bill is grading tests for his class. John, who is Bill's best friend, is just below passing. If Bill gives him a break he can help him pass. John thinks Bill should help him. Do you ...

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

7. People should not expect too much out of life so they won't be disappointed.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_



8. Planning only makes a person unhappy since your plans hardly ever work out anyhow.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

9. The wise person lives for today and lets tomorrow take care of itself.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

10. I wouldn't mind being thought of as an "odd ball."

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

11. I feel upset if the group doesn't approve of me.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

12. I never do things just to make others think well of me.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

13. If I disagree with what the group decides I would never say so.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

14. Going to school now will not help me get a better job later.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

15. Doing my schoolwork will make things easier for me after I get out of school.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

16. Going to school will not help my future in any way.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

17. Even if parents disapprove, they should not stop teenagers from seeing their friends.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

18. Teenagers should make their own decisions instead of their parents telling them what to do.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

19. Teenagers should never date a person against their parents' wishes.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

20. Children should obey all the rules their parents make for them.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

21. A job should make me powerful in the community.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

22. A job should make people look up to me.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

23. A job should give me a chance to get rich.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

24. A job should be steady so I will always have work.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

25. A job should let me work with people more than with things.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

26. A job should give me a chance to help mankind.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

27. I think of school mainly as a place for having fun.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

28. The main thing I enjoy about school is being with friends.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

29. I usually enjoy my classes here at school.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

30. In general, school is a good thing.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

31. Let's imagine that you always wanted to belong to a particular club in school, and that you were finally asked to join; but you find out that your parents don't want you to. Do you think that you would join anyway?

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

32. What if your parents and teachers approved, but by joining the club you would break with your best friend who was not asked to join. Should you join anyway?

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

33. What if your parents approved, but a teacher you liked didn't? Should you still join?

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

34. School should train me for my future job.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

35. School should help me get along with the different people I will meet in my lifetime.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

36. School should help me understand the world I now live in.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

37. I feel that I am at least as good as others I know.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

38. If I could, I'd rather be someone different from myself.

agree \_\_\_\_\_ slightly agree \_\_\_\_\_ disagree \_\_\_\_\_

39. On the whole, I am pretty well satisfied with myself.

agree \_\_\_\_\_

slightly agree \_\_\_\_\_

disagree \_\_\_\_\_

40. There are times when I think that I am no good at all.

agree \_\_\_\_\_

slightly agree \_\_\_\_\_

disagree \_\_\_\_\_

THE UNIVERSITY OF CALGARY  
VALUE ORIENTATIONS RE INDIAN CULTURE  
J. W. Friesen

On the basis of your knowledge of Indian culture,

1. How much do you think Indian people still like to do the following:

(a) Act in ways toward helping other Indians.

quite a lot \_\_\_\_\_ some \_\_\_\_\_ not at all \_\_\_\_\_

(b) Take part in Indian dances and ceremonies.

quite a lot \_\_\_\_\_ some \_\_\_\_\_ not at all \_\_\_\_\_

(c) Talk the Indian language.

quite a lot \_\_\_\_\_ some \_\_\_\_\_ not at all \_\_\_\_\_

(d) Take part in activities and ceremonies of societies.

quite a lot \_\_\_\_\_ some \_\_\_\_\_ not at all \_\_\_\_\_

(e) Tell Indian stories or myths.

quite a lot \_\_\_\_\_ some \_\_\_\_\_ not at all \_\_\_\_\_

(f) Make Indian arts and crafts.

quite a lot \_\_\_\_\_ some \_\_\_\_\_ not at all \_\_\_\_\_

2. In leadership, how much do Indian people do the following?

(a) Respect the chief and his council.

quite a lot \_\_\_\_\_ some \_\_\_\_\_ not at all \_\_\_\_\_

(b) Respect the idea of cooperating with band managers.

quite a lot \_\_\_\_\_ some \_\_\_\_\_ not at all \_\_\_\_\_

(c) Respect people who may give them leadership and advice.

quite a lot \_\_\_\_\_ some \_\_\_\_\_ not at all \_\_\_\_\_

3. How do the Indian people feel about their children? Do they want them  
to ... (Check one.)

Be "Indian" \_\_\_\_\_

Be like white men \_\_\_\_\_

Be able to act and  
work in both Indian  
and non-Indian worlds  
\_\_\_\_\_

4. How much education do Indian parents want their children to have?  
(Check one).

grade school \_\_\_\_\_ high school \_\_\_\_\_ vocational school \_\_\_\_\_  
college or university \_\_\_\_\_

5. What do Indian people think the University can do for them?

help them to train leaders	_____	help them to understand their problems	_____
help them keep their languages	_____	help them educate their young people	_____



## APPENDIX "C"

### The Reaction Report Assignment

"Course for Teachers in Indian Education"  
Education Foundations 413-3, 415-2.  
The University of Calgary

#### Instructions

Each week you will be required to submit a reaction report containing your personal appraisal of each lecture or seminar session.

These reports do not need to follow any specific structure; they should reflect your own personal feeling regarding one or more aspects of the particular session you are reporting on.

The reaction reports should be from one-half to one page in length.

Your first report should be with regard to the first session and should be handed in at the beginning of the second session.

Each report should contain the following information:

- 1) Your name or identification number.
- 2) The date or title of the lecture, or at least enough information so it may easily be identified.
- 3) Your personal reaction to anything relating to the session.

Please note: Avoid summarizing; if something transpired in the class which caused you to react in some way, positively or negatively, write it down.

# APPENDIX "D"

## Sample Rating for Session

January 25, 1970

### - "ATTITUDE FORMATION AND CHANGE"

Student Number	1	3	4	7	8	9	11	12	14	15	16	17	21	45	10	18	5	30	22	2	25	24	29	27	Average for 3 factors
Prejudice (existence of)																		2							
Indian parents (attitudes)										2															
Indian children (attitudes)										2															
Indian culture			3																						
Integration														3											
Assimilation		2										2									4				
Course												2													
Lecturer	3		4	3		3	2	4	3	3	3	2	2	3	4	3	4	3	3	3	3	3	3	3	3.05 (21)
Lecture (specific)	2	3	5	2	2	2	3	3	5	2	2	2	2	4	2	3	5	3	3	4	4	2	4		3.00 (21)
Adequacy of educ.system		3								4			2						4						
University involvement																									
Gov't involvement (past)										4															
Importance of Teacher						2						2													
Solution of problem					4	3				4		5			2										
Indian (general)	3		3	3		3		3	3		3	3	3	3	3			3	3	3		3	3		3.00 (16)
Importance of home														2		2		2	2						
Average for individuals	2.67	2.67	3.75	2.67	2.0	2.8	2.67	3.33	3.67	3.0	2.67	2.17	2.80	3.0	2.75	2.67	4.5	2.6	3.0	3.33	3.67	2.67	3.33		
Average 2.97																									

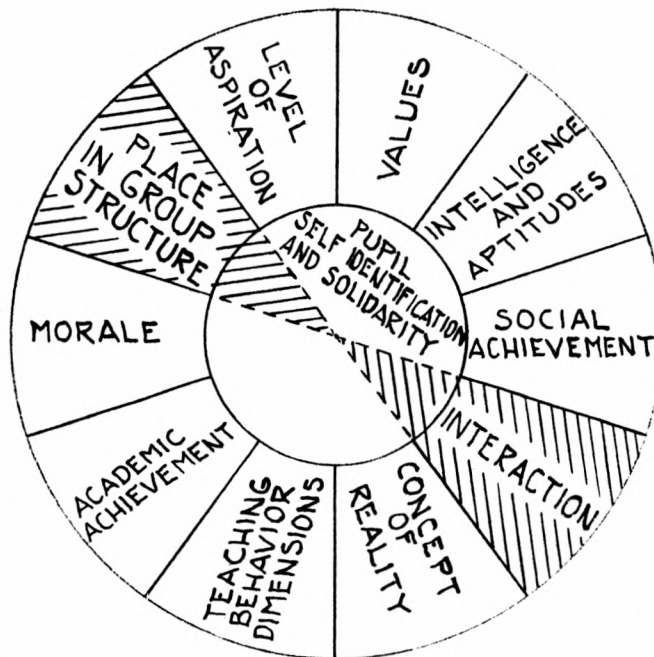


Part III

Pupils' Interperson-Perceptions of Place  
in Group Structure and Interaction

Louise C. Lyon

Department of Educational Foundations



RECOMMENDATIONS  
PUPILS' INTERPERSON-PERCEPTIONS  
OF  
PLACE IN GROUP STRUCTURE AND INTERACTION

1. Indian children should be included with children of other ethnic origins in learning situations to gain better English language elaborated code abilities.
2. Remedies for group structure discriminations against Indian children, which appear in integrated classroom findings, should be given special attention. Such remedies should include: a) allowing for more children of their own origin per class, b) the studying of the optimum number of such children per integrated class, and c) special teacher attention to aiding social equalization. Study of the qualities which bring both inter-ethnic and intra-ethnic social success for certain Indian children may aid teachers to gain understandings for better integrated classroom relationships.
3. Teacher considerations for more interaction with upwardly and downwardly socially mobile children should be encouraged. Reinforcement for these children as much as for the socially stable children, whom teachers apparently endorse, may bring more positive social classroom climates.
4. Special consideration of both Indian and Non-Indian children lower in classroom structural positions seems necessary. Further study to aid these children in their relationships should include more understandings of correlations which may exist between their English language elaborated code abilities and social success.

Native children's use of English language elaborated code in both inter-ethnic and intra-ethnic verbal interactions particularly needs further study.

5. Teachers of native children need to give special help in written English language elaborated code expressions, particularly in complex and compound sentence constructions and in encouragement of longer written expressions.
6. The training of teachers of native children should include special emphasis upon techniques by which pupils may gain more positive social identifications. The focus should be upon intercultural education with particular attention given to positive group dynamics' procedures. Included should be instruction in English as a Second Language for both verbal and written elaborated code competencies. Such instruction should consider that English as a Second Language for some native children may seem unnecessary as they hold to native ways; for such children, motivation to learn English must be engendered.

Included in the training of such teachers should be evaluation procedures by which social relationships may be ascertained. Such evaluations

should include understandings of interaction analysis and group structure analysis so that the teacher can identify the interaction ability and status of the disadvantaged learner. Only through adequate perception of the place where such a learner stands can the teacher help to build the intercultural bridges needed for coping with life in the larger society.



The structure of the social system of a classroom is involved with pupil choices of one another in cognitive, affective, and activity orientations. The results of a structural analysis of a classroom reveal cliques, clusters, pairs, rejectees, and isolates.<sup>1</sup> Perhaps the key to group structure could be said to lie in the manner in which learners interact with one another. Group structure and interaction should be interrelated. "Who" we choose to esteem, like and/or work with does affect our interaction patterns. Conversely, "who" we interact with affects those we choose to esteem, like and/or work with. The question for Part III of this research has to do with structural and interaction patterns of Indian and non-Indian children, specifically:

"With whom do Indian and non-Indian children interact, and how is this interaction related to their choices of one another in the structural plan of their classroom social system?"

Teachers of classrooms which contain pupils of more than one culture often point out that pupils relate to one another in different ways. Given a child of a minority culture, mixed in with pupils of a dominant culture, an estrangement of the child from his peers seems to occur. If the child interacts frequently with his peers in face-to-face interactions which are pleasant, he may be accepted for what he is and not what he appears to be.<sup>2</sup> The classroom situation in which two to nine pupils of other cultures find themselves, however, will reveal different kinds of structural relationships.<sup>3</sup> In such an instance, pupils of the subcultures will tend to form themselves into small clusters or cliques, or assume rejectee or isolate positions within the larger classroom structure. Such behavior is particularly noticeable during

play, for example, when the children are on the playground or engaged in indoor recreational play.

Previous research by the author with pupils of grade levels similar to those studied in the present research reveals that boys and girls, age twelve and under, did tend to form themselves into clique structures as they related to one another in classroom learning.<sup>4</sup> Children of different cultures in such structures did seem to assume isolated positions from the larger classroom social groups.

Teachers prefer to have children of minority group cultures in smaller numbers in their classrooms because it seems to ease tensions and makes their classroom task of dealing with the social climate of learning easier. "Teachers in Alberta are concerned about the administration and supervision of native pupils in totally Indian classrooms. Indian pupils seem to be viewed differently from non-Indian pupils."<sup>5</sup>

The sample drawn upon for the Structure and Interaction Analyses included the six hundred and sixty-six pupils in Grades Five through Nine mentioned in the Introduction, of which one hundred and twenty-eight pupils were Indian and five hundred and thirty-eight pupils were non-Indian. Specific numbers of pupils utilized in specific analyses are reported as part of the statistical appendixes which support Part III.

Pupils were observed and tested in Language Arts classes for the most part. Teachers were requested to allow for interaction for communication effect in video-taped class sessions.

#### Introduction to Interaction and Structure

The Meanings of Interaction and Structure. Because interaction and

structure were hypothesized as being closely related, a discussion of the meaning of classroom group structure seems meaningless without concomitant understandings of group interactions. Berlo tells us that "the concept of interaction is central to an understanding of the concept of process in communication."<sup>6</sup> Communication represents an attempt to bridge the gap between two individuals through the production and reception of messages which have meanings for both. Interaction involves reciprocal role-taking, and empathy. Involved are four levels of process:

- (i) a definitional-physical interdependence - which requires the dyadic nature of concepts of source and receiver.
- (ii) an action-reaction interdependence - which functions through continual feedback and feedforward.
- (iii) an interdependence of expectations or empathy - which is concerned with what we believe is going on within another person.
- (iv) reciprocal role-taking which is communication through interacting with another person.<sup>7</sup>

These levels of process were considered to be the inherent definitions of interaction and its resultant structure.

Structure-Interaction. The group structure questionnaire and concepts for its analysis, Appendix I, was developed in part from Homans' theory of the formation of groups.<sup>8</sup> Homans contends that groups are formed as interaction proceeds towards feelings of sentiment. Activities, norms and the status system then develop. As norms are established, the patterns of the internal system appear. Homans develops his theory through many linked hypotheses, chief among which are:

- (i) The greater the interaction between two persons, the greater the sentiments of affection they feel for one another.<sup>9</sup>
- (ii) If the interactions between the members of a group are frequent in the external system, sentiments of liking will grow up between them, and these sentiments will lead in turn to further interactions, over and above the interactions of the external system.<sup>10</sup>
- (iii) The more frequently persons interact with one another, the more alike in some respects both their activities and their sentiments tend to become.<sup>11</sup>
- (iv) If for any reason interaction in the internal system decreased, then activity would decay and sentiments of friendliness weaken.<sup>12</sup>
- (v) If the scheme of activities is changed, the scheme of interaction will, in general, change also, and vice versa.<sup>13</sup>
- (vi) The higher a person's social rank, the wider will be the range of his interactions.<sup>14</sup>
- (vii) The norms of social behavior arise out of actual social behavior. Norms, once established, tend to change more slowly than actual social behavior.<sup>15</sup>
- (viii) The higher the rank of a person within a group, the more nearly his activities conform to the norms of the group.<sup>16</sup>
- (ix) The internal system is continually emerging out of the external and continuously feeding back to modify the external system as a whole into something more than the external system started with.<sup>17</sup>

The rules for the graphics employed in the sociometric analysis, the "Lyon-Kite" structural positionings, were developed for research with Spanish-speaking and non-Spanish speaking pupils in elementary schools in a rural area of Southern California.<sup>18</sup> Appendix II contains the rules for the "Lyon-Kite" sociometric analyses. Figures I, II, and III which follow, are examples of the sociometric analyses of non-integrated classrooms. Figures IV and V are examples of group structures of integrated classrooms.

Figure I

"Lyon-Kite" Graphic for Classroom No. I  
Revealing Sociometric Analysis for a  
Non-Integrated Classroom - Grade 5-6  
(All Blackfoot Pupils)

External System of Class I  
Based on Projective Interaction Questions  
First Structural Testing

R.O.	Child No.	Individual Choice Scores	
1	3	38	Formal Leader
2	27	28	
3	4	25	
4.5	5	22	
4.5	19	22	
6	11	21	
7	1	20	
8	18	19	
9	20	18	$Q_3 = 17.25$
10	21	16	
11	33	15	
12.5	12	13	
12.5	28	13	
14	14	12	
15	9	11	
17.5	2	10	
17.5	6	10	$Mdn. = 10.00$
17.5	24	10	
17.5	25	10	
20	30	9	
22	8	8	
22	16	8	
22	23	8	
25	13	7	
25	22	7	$Q_1 = 7.00$
25	26	7	
27	15	6	
29	7	5	
29	10	5	
29	32	5	
31	29	4	
32.5	17	2	
32.5	31	2	
		416	
		64	
		Total 480	

Internal System of Class I  
Based on Projective Interaction Questions  
First Structural Testing

R.O.	Child No.	Mutual Choice Scores	
1	3	29	Informal Leader
2	28	24	
3	11	23	
4	5	22	
5	20	21	
6	21	19	
7.5	12	18	
7.5	26	18	
9	33	16	$Q_3 = 15.75$
12	2	15	
12	4	15	
12	6	15	
12	8	15	
12	25	15	
15	14	13	
17.5	13	12	
17.5	19	12	$Mdn. = 12.00$
17.5	22	12	
17.5	27	12	
20	7	11	
21	16	10	
22.5	9	9	
22.5	32	9	
24	30	7	
26	15	6	$Q_1 = 6.00$
26	18	6	
26	24	6	
28.5	17	5	
28.5	29	5	
30.5	23	3	
30.5	31	3	
32.5	1	0	
32.5	10	0	
		406	

ALL ARE BLACKFOOT INDIAN STUDENTS

CHILD NO.10 IS AN INTERACTION CONNECTOR ISOLATE

CHILD NO.1 DID NOT COMPLETE QUESTIONNAIRE

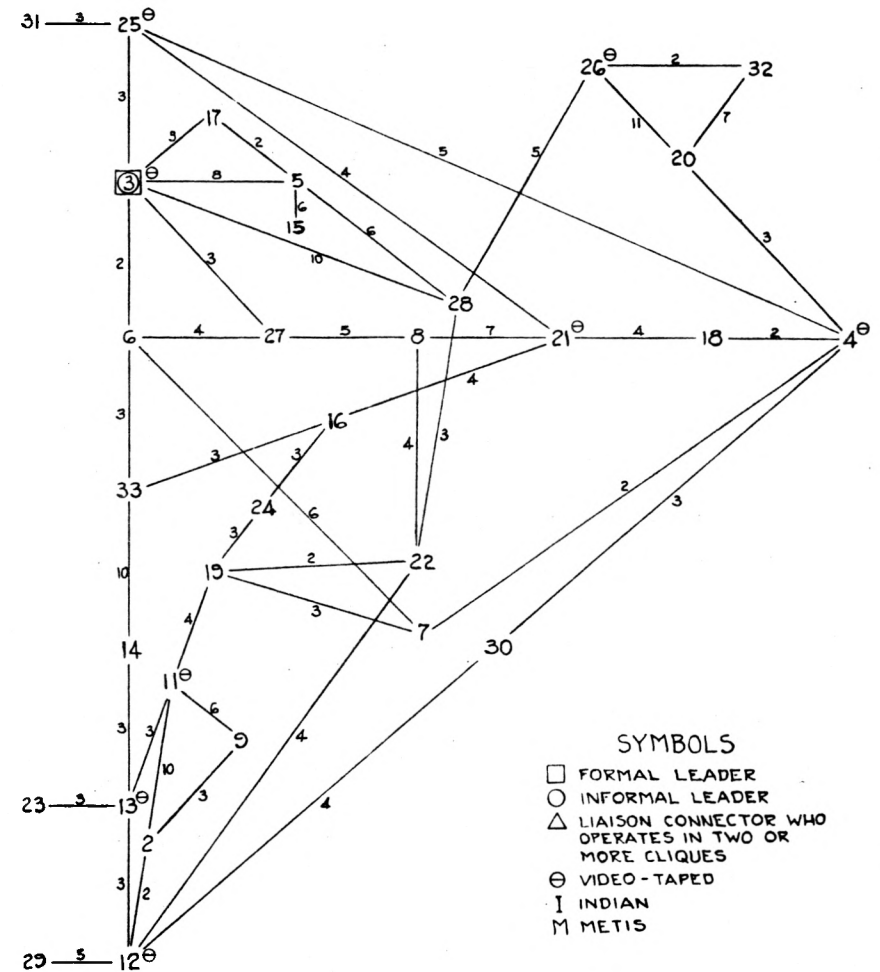


Figure II

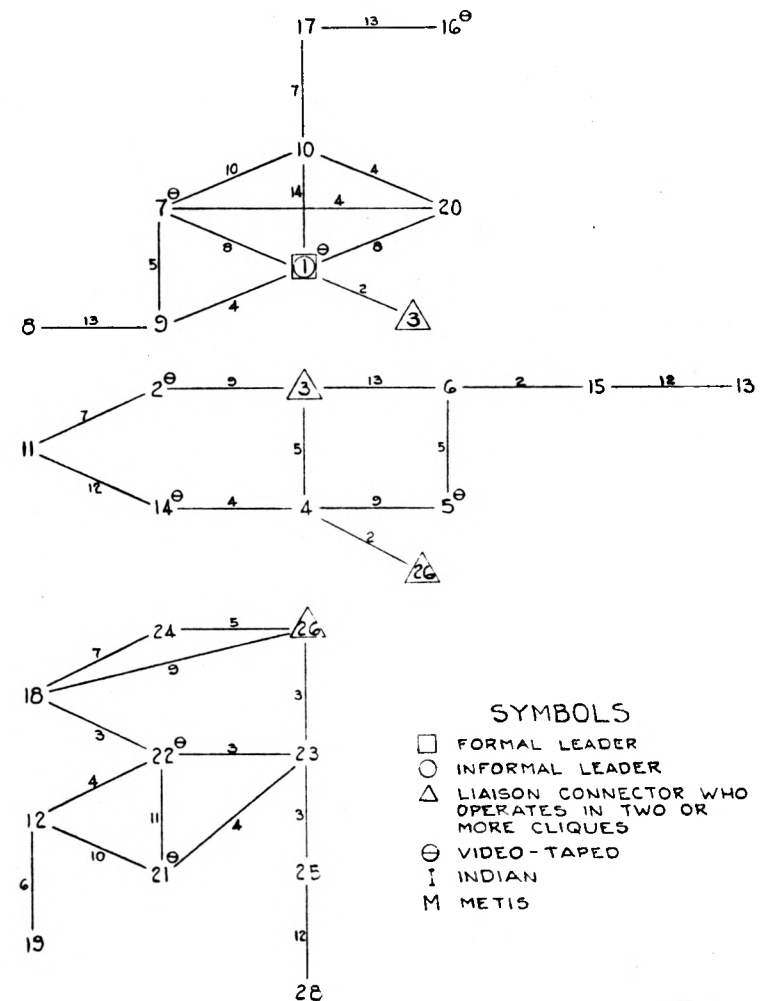
"Lyon-Kite" Graphic for Classroom No. XI  
Revealing Sociometric Analysis for a  
Non-Integrated Classroom - Grade 7-8  
(All Blackfoot Pupils)

External System of Class XI  
Based on Projective Interaction Questions  
First Structural Testing

R.O.	Child No.	Individual Choice Scores
1	3	44
2	1	42
3	10	30
4	7	23
5	21	19
6	5	17
7	2	15
8	9	14
10.5	4	13
10.5	6	13
10.5	22	13
10.5	26	13
13	12	12
15.5	11	11
15.5	17	11
15.5	18	11
15.5	25	11
19.5	16	9
19.5	20	9
19.5	23	9
19.5	28	9
22.5	13	8
22.5	15	8
24	14	6
25	24	5
26.5	8	4
26.5	19	4
28	27	0
		383
		N/A 22
		Total 405

Internal System of Class XI  
Based on Projective Interaction Questions  
First Structural Testing

R.O.	Child No.	Mutual Choice Scores
1	1	36
2	10	35
3	3	29
4	7	27
5	21	25
6	9	22
7	22	21
9.5	4	20
9.5	6	20
9.5	12	20
9.5	17	20
13	11	19
13	18	19
13	26	19
16	2	16
16	14	16
16	20	16
18	25	15
19.5	5	14
19.5	15	14
22	8	13
22	16	13
22	23	13
25	13	12
25	24	12
25	28	12
27	19	6
28	27	0
		504



ALL ARE BLACKFOOT INDIAN STUDENTS

CHILD NO. 27 IS AN INTERACTION CONNECTOR ISOLATE

CHILD NO. 27 DID NOT COMPLETE THE QUESTIONNAIRE



Figure III

"Lyon-Kite" Graphic for Classroom No. IV  
Revealing Sociometric Analysis for a  
Non-Integrated Classroom - Grade 6-7  
(All Stony Pupils)

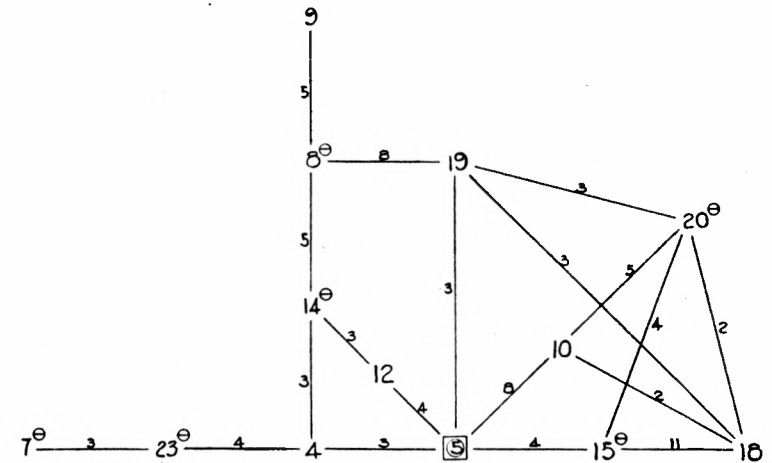
External System of Class IV  
Based on Projective Interaction Questions  
First Structural Testing

R.O.	Child No.	Individual Choice Scores
1	5	24 Formal Leader
2	19	15
3.5	10	14
3.5	18	14
6.5	4	13
6.5	8	13
6.5	14	13 $Q_1 = 12.75$
8	15	12
9	9	11
10	3	10
11.5	1	9
11.5	20	9
13	11	8 Mdn. = 7.50
14	12	7
15	21	6
16	7	5
18.5	2	4
18.5	16	4
18.5	24	4 $Q_1 = 4.00$
18.5	25	4
22	13	2
22	17	2
22	23	2
24.5	6	0
24.5	22	0
		<u>205</u>
		N/A 50
		Total 255

Internal System of Class IV\*  
Based on Projective Interaction Questions  
First Structural Testing

R.O.	Child No.	Mutual Choice Scores
1	5	22 Informal Leader
2	15	19
3.5	8	18
3.5	18	18
5	19	17
6	10	15
7	20	14 $Q_1 = 13.25$
8	14	11
9	4	10
10.5	12	7
10.5	23	7
12	9	5
13	7	3 Mdn. = 1.50
19.5	1	0
19.5	2	0
19.5	3	0
19.5	6	0
19.5	11	0
19.5	13	0 $Q_1 = 0.00$
19.5	16	0
19.5	17	0
19.5	21	0
19.5	22	0
19.5	24	0
19.5	25	0
		<u>166</u>

\*Note: Eight children in this room did not complete the questionnaire. Such lack of cooperation was atypical.



SYMBOLS

- FORMAL LEADER
- INFORMAL LEADER
- △ LIAISON CONNECTOR WHO OPERATES IN TWO OR MORE CLIQUES
- ⊗ VIDEO-TAPED
- I INDIAN
- M METIS

ALL ARE STONY INDIAN STUDENTS

CHILDREN NO. 5<sup>⊗</sup>, 6, 11, 13, 22 & 25 ARE INTERACTION CONNECTOR ISOLATES

CHILDREN NO. 1<sup>⊗</sup>, 2, 6, 16, 17, 21, 22, 24 DID NOT COMPLETE QUESTIONNAIRES

Figure IV

"Lyon-Kite" Graphic for Classroom IX  
Revealing Sociometric Analysis for an  
Integrated Classroom - Grade 7  
(Non-Indian and Blackfoot Pupils)

External System of Class IX  
Based on Projective Interaction Questions  
First Structural Testing

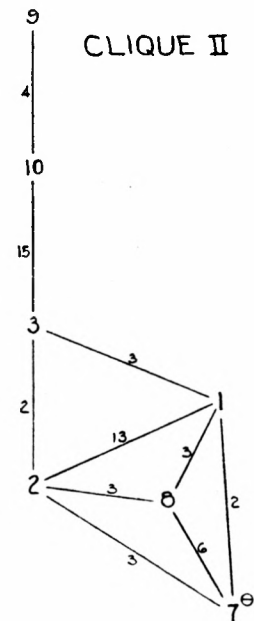
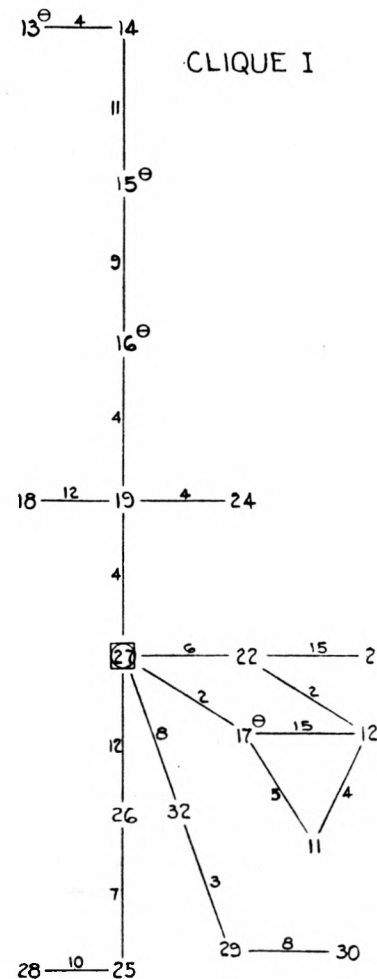
R.O.	Child No.	Individual Choice Scores	
1	27	38	Formal Leader
2	17	33	
3	19	28	
4	22	23	
6	12	17	
6	15	17	
6	18	17	
8	3	16	
9.5	2	15	Q <sub>1</sub> = 15.00
9.5	10	15	
11	25	14	
12	8	13	
13	14	12	
14	21	11	
16	1	10	
16	13	10	
16	32	10	Mdn. = 10.00
18.5	11	9	
18.5	26	9	
20.5	16	8	
20.5	28	8	
22.5	7	7	
22.5	29	7	
24	6 I	6	
25.5	9	5	Q <sub>1</sub> = 5.00
25.5	23 M	5	
27	31 I	4	
28.5	20 I	3	
28.5	24	3	
31	4 I	2	
31	5 I	2	
31	30	2	
		379	
		N/A 71	
		Total 450	

Internal System of Class IX  
Based on Projective Interaction Questions  
First Structural Testing

R.O.	Child No	Mutual Choice Scores	
1	27	32	Informal Leader
2.5	2	24	
2.5	19	24	
4	22	23	
5	17	22	
6.5	1	21	
6.5	12	21	
8.5	3	20	
8.5	15	20	Q <sub>1</sub> = 20.00
10.5	10	19	
10.5	26	19	
12	29	18	
13	25	17	
15	8	15	
15	14	15	
15	21	15	
17	16	13	Mdn. = 13.00
18	18	12	
19.5	7	11	
19.5	32	11	
21	11	9	
22	30	8	
24	9	4	
24	13	4	
24	24	4	Q <sub>1</sub> = 4.00
26	28	3	
29.5	4 I	0	
29.5	5 I	0	
29.5	6 I	0	
29.5	20 I	0	
29.5	23 M	0	
29.5	31 I	0	
		404	

CHILDREN NO. 5I, 6I, 20I & 23M ARE INTERACTION  
CONNECTOR ISOLATES

CHILDREN NO. 4 & 31 DID NOT COMPLETE QUESTIONNAIRES



- SYMBOLS
- FORMAL LEADER
  - INFORMAL LEADER
  - △ LIAISON CONNECTOR WHO OPERATES IN TWO OR MORE CLIQUES
  - ⊖ VIDEO-TAPED
  - I INDIAN
  - M METIS

Figure V

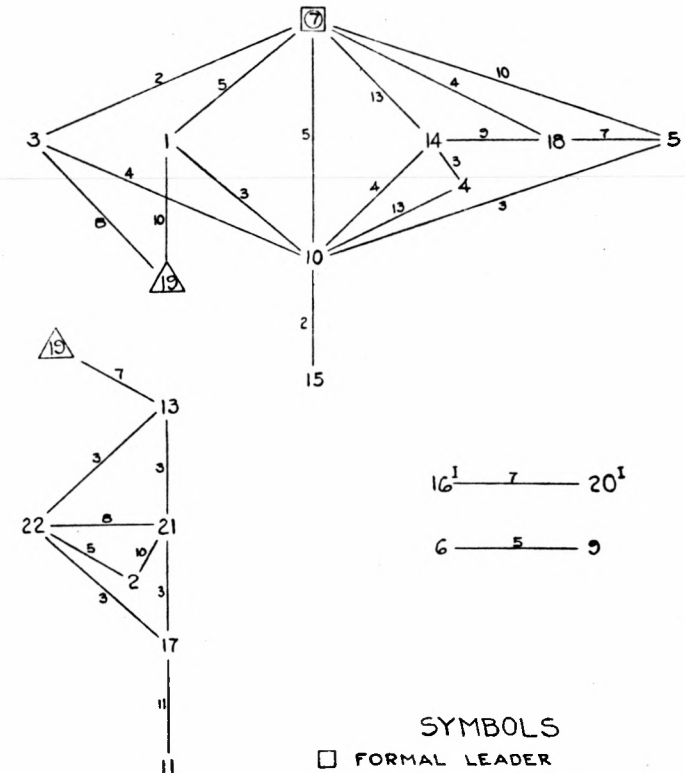
"Lyon-Kite" Graphic for Classroom No. XV  
Revealing Sociometric Analysis for an  
Integrated Classroom - Grade 8  
(Non-Indian and Stony Pupils)

External System of Class XV  
Based on Projective Interaction Questions  
First Structural Testing

R.O.	Child No.	Individual Choice Scores
1	7	33 Formal Leader
2	5	32
3	14	29
4	10	26
5	21	24
6	1	22 $Q_1 = 19.75$
7	2	19
8	22	15
9	19	14
10	3	13
11	13	12
12	4	11 Mdn. = 10.00
13	11	9
14	18	7
15.5	16 I	6
15.5	17	6
17	9	4
18	12	3 $Q_1 = 2.75$
20.5	6	2
20.5	8	2
20.5	15	2
20.5	23	2
23	20 I	1
		294
		N/A 21
		Total 315

Internal System of Class XV  
Based on Projective Interaction Questions  
First Structural Testing

R.O.	Child No.	Mutual Choice Scores
1	7	39 Informal Leader
2	10	34
3	14	29
4	19	25
5	21	24
6.5	5	20 $Q_1 = 20.00$
6.5	18	20
8	22	19
9	1	18
10	17	17
11	4	16
12	2	15 Mdn. = 14.50
13	3	14
14	13	13
15	11	11
16.5	16 I	7
16.5	20 I	7
18.5	6	5 $Q_1 = 5.00$
18.5	9	5
20	15	2
22	8	0
22	12	0
22	23	0
		340



16<sup>I</sup> — 7 — 20<sup>I</sup>  
6 — 5 — 9

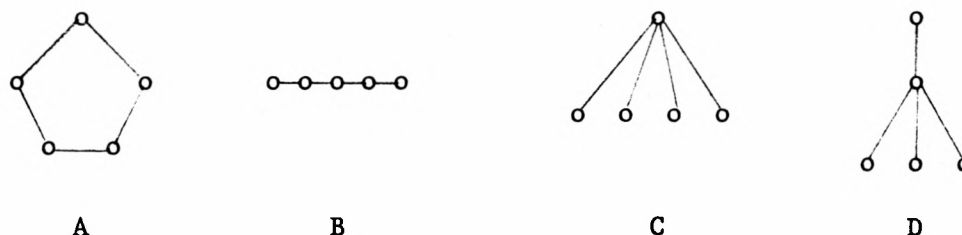
SYMBOLS

- FORMAL LEADER
- INFORMAL LEADER
- △ LIAISON CONNECTOR WHO OPERATES IN TWO OR MORE CLIQUES
- ⊙ VIDEO-TAPED
- I INDIAN
- M METIS

CHILD NO. 8 & 23 DID NOT COMPLETE QUESTIONNAIRES  
CHILD NO. 12 IS AN INTERACTION CONNECTOR ISOLATE

The "kite" concepts emerged from study of Bavelas' communication network structures which reveal that groups operating with certain communication structures seem to excel over others in speed and accuracy of problem solving.<sup>19</sup> Bavelas varied the ways in which five individuals were linked, and studied centrality of positioning which seemed to indicate leadership and ease of interaction.

Figure VI. Bavelas: Communication Patterns



Among patterns A, B, and C, Bavelas pointed to communication differences. In pattern A, each individual can communicate with two others in the group directly -- that is, without relaying a message through some other person. In patterns C and D, there is only one individual in the group who can carry the communication directly with all the others. In pattern A, any individual can communicate with any one of the others with no more than a single "relay." In pattern B, two peripheral individuals may relay messages through as many as three others in order to communicate. The notion of distance also is involved. Bavelas found that occupants of the more peripheral positions usually showed less satisfaction with the job and less zeal in working on the task than did those in more central positions.

In addition to seeking a basis for the structural analysis in Homans' and Bavelas' works, also employed were: Moreno and Jennings' concepts of chain relations within cliques,<sup>20</sup> Luce's concepts of antimetry and n-chains,<sup>21</sup>

Jennings' prominence and choice for status,<sup>22</sup> Harary's mathematical definition of leadership,<sup>23</sup> Leavitt's leadership centrality,<sup>24</sup> Gronlund's definitions of isolate,<sup>25</sup> and Ross and Harary's liaison positions of group members as articulation points.<sup>26</sup>

This research explores the structure of classroom groups based upon such premises as these to ascertain likenesses and differences which exist for Indian and non-Indian children in their linkages to one another. The questionnaire, Appendix I, includes consideration of the three levels of personality functioning: cognitive, affective, activity; and a projective means of assessing interaction functioning. The instrument was used in its entirety and in its interaction designations only. Single choice rank ordering selections of the children in each classroom which appear in the example shown (Table I) are based upon the questionnaire as a whole and designate the external system of the classroom with the first rank ordered position being that of the Classroom Formal Leader. Mutual choice rank order positionings of the children in each classroom, also based upon the entire questionnaire, define the internal system with the pupil in Rank Order One Position being the Informal Classroom Leader. (See example, Table II.)

Only the questions dealing with interaction were used as bases for the "Lyon-Kite" graphic diagrams. These were question numbers 2, 3, 7, 8, and 10. A look at the External and Internal System Interaction aspects of the classrooms can be seen in the rank order columns which appear on the Lyon-Kite graphic figures (Figures I - V). The first rank ordered column refers to the External Interaction System. The second rank ordered column is that of the Internal Interaction System from which the Lyon-Kite figures emerged. It was believed that the graphics

Table I

Rank Order Index for External System of Classroom 15  
 (Based upon Single Choices of Pupils for One Another  
 as Answers to the Total Structure Questionnaire,  
 Appendix I.)

Rank Order	Child No.	Individual Choice Strength	
1	7	104	Formal Leader
2	1	92	
3	10	74	
4	14	67	
5	21	54	
6	2	53	
			Q <sub>3</sub> = 44.00
7	6	41	
8.5	3	40	
8.5	5	40	
10	20 I	39	
11	19	38	
12.5	4	37	Median = 37.00
12.5	13	37	
14	11	34	
15	22	32	
16	16 I	21	
17	9	19	
18	17	16	Q <sub>1</sub> = 15.75
19	18	15	
20	12	12	
21	15	6	
22	8	5	
23	23	2	
		877	
		N/A 68	
		Total 945	

Child No. 12 is  
 an Isolate.  
 Pupils No. 16 and  
 20 are Indians.



Table II

Rank Order Index for Internal System of Classroom 15  
(Based upon Mutual Choices of Pupils for One Another  
as answers to the Total Structure Questionnaire,  
Appendix I.)

Rank Order	Child No.	Mutual Choice Strength	
1	7	131	Informal Leader
2	1	105	
3	10	102	
4	14	91	
5	2	79	
6	21	74	
			$Q_3 = 72.50$
7	4	72	
8	19	71	
9	13	65	
10	6	64	
11	22	63	
12	3	61	
			Median = 60.50
13	5	60	
14	20 I	57	
15	17	51	
16	11	50	
17	18	44	
18	9	40	
			$Q_1 = 39.25$
19	16 I	37	
20	15	21	
21	12	20	
22.5	8	0	
22.5	23	0	
		1358	

Children No. 8 and 23  
did not complete the  
questionnaire.

Child No. 12 is re-  
vealed to be an Iso-  
late when Structural  
Graphic is viewed.

Pupils No. 16 and 20  
are Indians.

being so based would be more closely related to interaction patterns which emerged for the children in the classrooms.

Table III provides a view of Formal Leader changes apparent from the first structural testing to the second for Study Groups I and II.\* Both the formal leader as designated by Rank Order I position on the Total Individual Choices and the formal interaction leader as shown by Rank Order I position of the Interaction Individual Choices are shown for each class for the first and second testing.

It is apparent that the formal leader and the formal interaction leader are the same person in the majority of instances. This was true for Indian non-integrated Class Number IV as well, although non-integrated Classes I and XI did not support this pattern. The finding does seem to bear out the premise that "the one who talks the most or interacts the most is also the formal leader."<sup>27,28</sup> (at least for integrated classes).

Study Group I had five out of fifteen changes in formal leadership position from the first testing to the second or approximately a third of the classes that underwent a formal leadership change.\* Study Group II had three out of fourteen changes. This could have been due to intervening variables such as teacher appointment of or frequent election of class chairmen. Some variability in leadership as designated by the changes from the first testing instance to the second was expected.<sup>29</sup> Unfortunately, there were four instances in Study Group I and two for Study Group II where the teacher did not give the social structure test.

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\*Study Group I teachers were involved in a class in intercultural education while Study Group II teachers were not. (See Introduction to this research.)

Table III

Formal Leaders of the External System  
Study Groups I and II

## STUDY GROUP I

	CLASS I	CLASS III	CLASS IV	CLASS VII	CLASS VIII	CLASS IX	CLASS X	CLASS XI	CLASS XII	CLASS XIV	CLASS XV	CLASS XVI	CLASS XVII	CLASS XIX	CLASS XXI
1 <sup>ST</sup> TESTING	3 *   3	1   3	5   5	12   12	1   1	27   27	11   11	1   3	10   10	20   20	7   7	7   18	5   5	23   23	**
2 <sup>ND</sup> TESTING	27   3	**	5   5	**	1   1	27   27	**	1   1	10   10	9   1	14   14	18   18	5   5	24   23	5   1

## STUDY GROUP II

	CLASS XL	CLASS XLI	CLASS XLII	CLASS XLIII	CLASS XLIV	CLASS XLV	CLASS XLVI	CLASS XLVII	CLASS XLVIII	CLASS XLIX	CLASS L	CLASS LI	CLASS LII	CLASS LIII	
1 <sup>ST</sup> TESTING	22   22	4   4	27   27	**	5   3	3   3	11   11	2   2	8   8	16   14	6   6	21   21	4   4	1   1	
2 <sup>ND</sup> TESTING	23   23	4   15	27   27	**	3   3	3   3	11   11	4   2	8   8	16   14	6   6	21   21	4   4	1   1	

\* KEY

N FORMAL LEADER (BASED ON TOTAL INDIVIDUAL CHOICES)

N FORMAL INTERACTION LEADER (BASED ON INTERACTION INDIVIDUAL CHOICES)

\*\* TEACHER FAILED TO GIVE STRUCTURE TEST

NOTE - CLASSES I, IV, XI ARE TOTALLY INDIAN

Table IV presents the changes in informal leaders from the first testing to the second. The table shows the informal leader as based upon the first rank ordered position of the Total Mutual Choices, and the informal interaction leader as based upon the first rank ordered position for the Interaction Question Mutual Choices. Shown also are clique leaders of independent cliques and liaison connectors or pupils who tied or related two linked cliques as revealed in the Lyon-Kite graphics. Eight out of fifteen informal leader positions underwent change for Study Group I from the first to the second testing. Four Study Group I teachers failed to conduct both sessions of the group structure test. Seven out of thirteen changes in informal leaderships from the first to second testing took place for Study Group II. One teacher failed to give both sessions of the group structure test. Approximately one half of the informal leaders of Study Group I and Study Group II were also interaction informal leaders (fourteen out of twenty-six instances tested for each Study Group). Other concepts than interaction may be present in the selection of an informal leader.

Sixteen out of twenty-six Study Group I sociometric testing instances revealed independent clique and liaison connector leaders. Eleven out of twenty-six Study Group II sociometric testing instances revealed these kinds of leadership.\* These findings signify that complexity of structure existed for certain classes tested.

Interaction premises were used in designing the sociometric questions of the structural analyses for the study. In the design of the signal and sign interaction analyses, the impingement of teacher actions across peer

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\*There were twenty-six sociometric analyses for Group I for the two testing periods and twenty-six sociometric analyses for Group II for the two testing periods.

Table IV

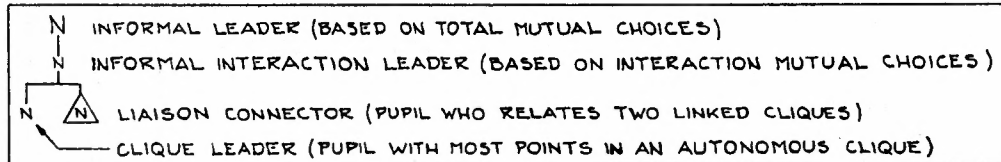
Informal Leaders and Liaison Connectors  
of the Internal System  
Study Groups I and II  
STUDY GROUP I

	CLASS I	CLASS III	CLASS IV	CLASS VII	CLASS VIII	CLASS IX	CLASS X	CLASS XI	CLASS XII	CLASS XIV	CLASS XV	CLASS XVI	CLASS XVII	CLASS XIX	CLASS XXI
1 <sup>ST</sup> TESTING	3 3 *	1 3 △11	5 5	12 12 12 10	1 2 △1 17	27 27 27 2	14 11 △16	1 1 △3 26	10 11 △16	27 9 △14 17	7 7 △19	7 10 △18	3 5	16 16	**
2 <sup>ND</sup> TESTING	28 21	**	8 8	**	1 9 △17	21 27	**	1 1 1 12	10 10 10 2	9 13	14 10 △2 1	18 18	5 5	23 23 △23	5 5 5 1

## STUDY GROUP II

	CLASS XL	CLASS XLI	CLASS XLII	CLASS XLIII	CLASS XLIV	CLASS XLV	CLASS XLVI	CLASS XLVII	CLASS XLVIII	CLASS XLIX	CLASS L	CLASS LI	CLASS LII	CLASS LIII	
1 <sup>ST</sup> TESTING	22 22 △22	15 4	27 27	**	5 5 △0 12	29 3	11 11	15 15 △15	8 10 △0	16 14	6 6 6 5	21 3	16 16 △15	1 1	
2 <sup>ND</sup> TESTING	23 23	1 4	27 27 27 10	**	5 12	3 2 △14	11 11	4 2 △4	8 0 △10	16 6	6 6 △24	33 33	4 2	3 2	

\* KEY



\*\* TEACHER FAILED TO GIVE STRUCTURE TEST

NOTE - CLASSES I, IV, XI ARE TOTALLY INDIAN

structural linkages was considered.

Interaction-Structure. Interaction was studied in the research by viewing signal communications of the pupils and teachers involved, and sign reactions of the pupils to teacher probes regarding the beginning of a story, "a story stem" which the teacher read to the children. A "signal" is differentiated from a "sign" in that a signal is a gestural non-verbal communicative act, while a sign is a spoken or verbal interaction.<sup>30</sup> In addition, the pupils' reactions to the "story stem" in a written follow-up as well as their responses to picture inferences pertaining to concepts initiated in the story were obtained.

What shall be referred to as the first video taping report of pupils sought signal reactions of the pupils to the teacher and to one another in a classroom situation and in a play situation. "Port-a-pack" video equipment was used, and selected children within the classrooms were video-taped for timed two minute intervals per pupil to gain realizations of "to whom" they initiated action, and "from whom" they received action. The children were selected by allowing for all Indian pupils in integrated classrooms plus at least two non-Indian pupils in these situations to make up an optimum of eight pupils per classroom. Where pupils in non-integrated classrooms were video-taped, they were, of course, all ethnically Indian.

Both the connotation of action "initiated to and from" the teacher and that of action "initiated to and from peers" were considered in the assessment.<sup>31</sup> Care was taken also to allow for error inferences by the two raters who viewed the play-back of the video-tapes and recorded tallies of each signal sent or received. Error inferences included:



inability to understand signal, picture block-out due to too much or too little light, and interference due to the teacher or another pupil partially blocking the view of the person being assessed.

Appendix III provides a view of the areas of interaction sought by the two raters who reviewed Video Analysis - Part I video tapes to gain understandings of the "signal" portion of the analysis. The sums of two raters' talleys were obtained for each portion of the assessment, plus that for the entire signal interaction of the pupil being studied. An average of the talley marks for each portion and an average of the total talleys were then obtained. This portion of the interaction analysis dealt only with signals of selected pupils because the technical equipment lacked the capacity to pick up all pupils in the classroom adequately in the picture frame and the ability to differentiate the sounds of particular voices of pupils being video-taped.

The classroom video-taping for Video Analysis I, the "signal" analysis, was performed during January and February, 1969. The video-taping for Video Analysis II, the "sign" analysis was performed during May and June, 1969.

Video-taping II centered around the pupils originally video-taped for signal actions-reactions. The pupils were brought up before the class by the teacher so that they might act in a teacher-small group panel discussion.<sup>32</sup> Discussion emphasis was upon the story stem, a story partially told by the teacher about "George, an Indian boy." (See Appendix IV.) Teachers received the story-stem in advance so that they might acquaint themselves with it; have opportunities to consult with the researcher, should they wish to do so; and have time

to acquaint the children in the classroom with the idea of small group presentations, should this type of activity not be a regular practice. In addition to receiving the story-stem and directions as to its use, teachers were referred to a copy of Peter Farb's article, "How Do I Know You Mean What I Mean?"<sup>33</sup> It was intended that the teachers read the article for further understandings of some of the kinds of research finding the study probe was attempting to realize.

The camera used for Video Analysis II was once again of a "port-a-pack" variety. The video assistant attempted to follow the responses of the pupils to the teacher questions asked. Although members of the class other than those in the discussion panels at times joined in on the response session, only the responses of the discussion panel members were later assessed because these were the children video-taped in the first session. Two raters' responses to each video-tape were tallied, and as before, their average obtained for each category responded to by the individual children. Appendixes V-i and V-ii provide the format used by raters to evaluate Video Analysis II.

A third part of the interaction study, Analysis III, assumed a written form. The pupils in the classrooms were asked to go to their seats following the discussion of the story, and finish the story by writing an ending to it. This analysis also is included in the report.

A fourth and final portion of the interaction analysis involved the children marking an "X" with a pencil over a picture inference as answer to certain questions asked about the story.<sup>34</sup> Three questions were asked, and the pupils were allowed a choice of one answer to each question. Analysis Five, then, was a picture-symbolic response to

the story-stem. (See Appendix VI.)

It can be ascertained from the foregoing that Part III of the Perceptions Research does attempt to assess both signal and sign connotations of the pupils in oral, written, and pictographic dimensions.

The specific research problems probed through the use of the group structure and interaction processes were:

- (i) How do Indian and non-Indian pupils relate to one another in the structure of their classroom social systems?
- (ii) Do Indian children in integrated and non-integrated classrooms differ greatly in their status positions within the group social system?
- (iii) How do status position changes for Indian and non-Indian pupils relate to other kinds of pupil perceptions such as their morale, perceived social achievement, and concepts of teaching dimensions of learning behavior?
- (iv) How is the structure of these pupils related to their interaction?

#### Group Structure

The examples of Group Structure given in Figures I - V are typical of the kinds of sociometric graphics revealed for integrated and non-integrated classrooms in the study. Figure I, the non-integrated all Blackfoot Indian pupil classroom is a "solid" graphic structure showing all children linked together into a well integrated structure, except for Child No. 10, an isolate, and Child No. 1, who did not complete the questionnaire. Unless one looked at Figure II, also a non-integrated Blackfoot pupil class, one might erroneously conceive that Indian children tend to cohere closely. Figure II, however, reveals that this is not the case, that in answer to questions such as "who do you talk to?" and "Who talks to you?" Indian children also respond in the more differentiated patterns of cliques. The differences in Grade levels could not

be a particular reason for these differences, if previous research by the author is at all indicative of structural tendencies of elementary classrooms;<sup>35</sup> rather, the reasons for the differences may lie in other extraneous variables such as the type of lesson just previous to the testing, e.g. being more cognitive in orientation, -- or perhaps in pupil reactions to a particular kind of teacher dimension.

Figure III, the non-integrated Stony Indian classroom, cannot be assessed to give differences which might exist between Blackfoot and Stony pupils because eight children did not complete the questionnaire.<sup>36</sup>

Figure IV, an example of an integrated classroom containing non-Indian pupils and Blackfoot pupils shows one example of an integrated situation where the Indian children were isolates or did not complete the questionnaire. Another example of an integrated classroom is Figure V, which included Stony Indian and non-Indian pupils. Figure V reveals Indian Pupil No. 18 as cohering well with the group and another Indian pupil, No. 16, as a member of a pair. No consensus can be made that Stony pupils tend to integrate better structurally than Blackfoot pupils, because other integrated classrooms which contained Blackfoot pupils revealed structures similar to those in Figure V, the example just cited containing Stony pupils. The difference again must be due to variables such as dimensions of teaching behavior, perceived social achievement of the pupils tested or perhaps achievement differences which affect self perception and social relationships.

Structural Comparisons. Table V gives the Alpha Probability Designations for Sex, Age, Ethnicity, Indian pupils in Integrated and Non-Integrated Classrooms with Group Structure Connotations. The Lyon-Kite graphics pointed to the structural differences between Indian and non-

Indian pupils revealing some Indian pupils in integrated classrooms to be in less cohesive positions than non-Indian children. Table V, the first Alpha Probability analysis, reveals how very important this tool, the Group Structure Projection, is for ascertaining ethnic differences in classroom settings. All ethnic or Indian - non-Indian comparisons are significant at least at a .12 level of Chi-square significance. Indian pupils in Integrated or Non-Integrated Classrooms is significant at least at a .01 level of significance with all Structural Analyses, except for First Testing: Membership in a Structural Position on Lyon-Kite Graphics.

Sex designations are significant with First Testing Interaction Questions Mutual Choice Strengths and Second Testing Membership in a Structural Position on the Lyon-Kite Graphics.

Age is significant for the First Testing designations of: Individual Choice Quartile Scores on the Interaction Questions, (the external classroom system), Membership in a Structural Position on the Lyon-Kite Graphics (the internal system), and Interaction Question Mutual Choice Strengths from which the Lyon-Kite Graphics were built (also the internal system). It will be here noted that wherever individual structural choices of pupils are cited, the external classroom system is inferred. Mutual structural choices refer to internal system designations. Two aspects of these systems are presented in this research: the total structural system and the interaction structural system. Therefore, the research looks at:

Table V

Alpha Probability Designations for  
Sex, Age, Ethnicity, Indian Pupils in  
Integrated and Non-Integrated Classrooms  
With Group Structure Connotations

	First Testing: Total Individual Choices Quartile Scores <sup>4</sup>	First Testing: Total Mutual Choice Quartile Scores	First Testing: Individual Choice Quartile Scores on Interaction Questions 2,3,7,8,10	First Testing: Mutual Choice Quartile Scores on Interaction Questions 2,3,7,8,10	First Testing: Membership in e Structural Position on Lyon-Kite Graphics <sup>5</sup>	First Testing: Interaction Questions Mutual Choice Strengths		Second Testing: Total Individual Choice Quartile Scores	Second Testing: Total Mutual Choice Quartile Scores	Second Testing: Individual Choice Quartile Scores on Interaction Questions 2,3,7,8,10	Second Testing: Mutual Choice Quartile Scores on Interaction Questions 2,3,7,8,10	Second Testing: Membership in e Structural Position on Lyon-Kite Graphics	Second Testing: Interaction Questions Mutual Choice Strengths
Sex	.01 <sup>1</sup> 1.10 .77	.04 6.80 .07	-.09 3.77 .28	-.10 5.75 .12	N/A C = .10 <sup>3</sup> 6.24 .39	.12 9.70 .02		.02 .52 .91	.06 2.46 .48	-.08 3.53 .31	-.12 4.00 .26	N/A C = .18 17.32 .008	.13 4.56 .20
Age	.13 17.64 .12	.11 18.14 .11	.15 26.88 .01	.10 16.17 .18	N/A C = .31 68.49 .0000	-.16 28.17 .005		.07 23.13 .02	.08 25.64 .01	.09 21.17 .04	.12 28.56 .004	N/A C = .31 58.17 .0001	-.17 20.99 .05
Ethnicity	.27 <sup>2</sup> 16.07 .001	.25 12.77 .002	.29 17.99 .0004	.23 10.28 .01	N/A C = .12 9.90 .12	-.25 13.64 .003		.24 13.36 .003	.26 11.10 .01	.25 14.24 .002	.23 10.04 .01	N/A C = .18 18.32 .005	-.23 10.04 .01
Indian Integration	-.48 14.04 .002	-.48 15.56 .001	-.52 17.84 .0005	-.41 14.02 .002	N/A C = .53 48.97 .0000	.01 .62 .88		-.54 16.36 .001	-.51 13.37 .003	-.64 23.14 .0000	-.45 10.17 .01	N/A C = .41 20.49 .002	-.00 .05 .99

<sup>1</sup>Upper number in each cell refers to Gamma,  
middle number to Chi-square equivalence, and  
lower number to level of significance.

<sup>2</sup>Note: Particularly high Gamma indications  
in "boxed" areas.

<sup>3</sup>"C" refers to Contingency Coefficient.

<sup>4</sup>"Quartile Scores" refers to whether a pupil  
was in 1st, 2nd, 3rd, or 4th Quartile. This  
allowed for better comparisons of pupils in  
classes of varying sizes.

<sup>5</sup>Structural position is taken from Lyon-Kite  
graphics, whether child was a clique, cluster  
member, dangler, file member, isolate, etc.



External Classroom System (Esteem as a Basis)	{	As a Totality (Individual Choices to Total Structure Questionnaire)
		In Structural Interaction Delineations (Individual Choices to Interaction Questions Only)
Internal Classroom System (Coherence as a Basis)	{	As a Totality (Mutual Choices to Total Structure Questionnaire)
		In Structural Interaction Delineations (Mutual Choices to Interaction Questions Only)

Age also is significant for the Second Testing designations in every instance, the Quartile Position Scores, for Membership in a Structural Position on the Lyon-Kite Graphics, and for Interaction Question Mutual Choice Strengths from which the Lyon-Kite Graphics were built.

Sex Designation Comparisons. Appendix VII shows the Chi-square analyses which were significant: Sex with the First Testing Interaction Question Mutual Choice Score Strengths, and Sex with Second Testing Structural Positioning on the Lyon-Kite Graphics.

1. Sex with First Testing Interaction Question Mutual Choice Score Strengths reveals Chi square equal to 9.70, significant at .02 level with a Gamma of .12, Appendix VII.

Male pupils tested appear to have slightly less interaction structural strengths than do females tested.

2. Sex with Second Testing Structural Positioning on Lyon-Kite Graphics indicates Chi square equal to 17.32, significant at .008 with C equal to .18, Appendix VII.

Male pupils tend slightly more often to be in weaker structural positions in the classroom than do females when percentages for the weaker positions of isolate, pair, dangler, and file member are compared with percentages for the stronger positions of triad, quadrangle, and clique member positions.

Female percentages reveal that they tend to be in the stronger class percentages in triads, quadrangles, and clique member places.

It may be contended that pupils in this age range, i.e. approximately 12 years to 14 years, tend to reveal stronger group structure coherence for girls than boys.

Age Designation Comparisons. First testing Age Designation Comparisons which are significant appear in Appendixes VIII-i and VIII-ii. The findings are:

3. Age with First Testing Interaction Individual Choice Quartile Positions is significant at .01 level with Chi square equal to 24.88 and a Gamma of .15, Appendix VIII-i.

Pupils twelve years and younger seem to relate to their classroom peers with higher structural esteem for interaction external system linkages than do those fifteen years and older, while thirteen and fourteen year olds appear to be relatively evenly distributed in the four quartile positions.

4. Age with First Testing Interaction Question Mutual Choice Score Strengths reveals Chi square as 28.17, significant at .005 with Gamma equal to -.16, Appendix VIII-i.

Pupils eleven years old and younger appear to cohere more in internal system interaction than do pupils fifteen years old and older.

5. Age with First Testing Structural Positioning on Lyon-Kite Graphics shows Chi square equal to 68.49, significant at .0000 with C equal to .31, Appendix VIII-ii.

All pupils tested appear to cohere in cliqueing tendencies more frequently than in other group structure categories, except for those fifteen years and older who as frequently appear in isolate, dangler, and file member positions.

Growth and development variables may be intervening to give the variances in group structure.

Age with the Second Testing Quartile Positions are significant.

(See Table V and Appendix IX-i.) They reveal:

6. Age with Second Testing Individual Choice Quartile Scores reveals Chi square equal to 23.13, significant at .02 with Gamma equal to .07.

Pupils fourteen years old and younger tend to endorse the upper two quartile positions in Total External System Structure Choices; those fifteen years old and older are more inclined to endorse lower quartile external system esteem positions.

Once again, growth and development may be apparent here with those fifteen years and older responding perhaps to other kinds of esteem, e.g. cognitive esteem.

7. Age with Second Testing Total Mutual Choice Quartile Scores is significant at .01 level, with Chi square equal to 25.64 and Gamma equal to .08, Appendix IX-i, Page 1.

The pattern found for mutual choices or coherence in the Total Internal System seems to endorse that of the Total External System. (Refer to Point No. 6 above.)

8. Age with Second Testing Interaction Individual Choice Quartile Scores shows Chi square as 21.17, significant at .04 level, with Gamma equal to .09, Appendix IX-i, Page 2.

This analysis likewise endorses the Total External System esteem pattern of choices. (See No. 6 above.)

9. Age with Second Testing Interaction Mutual Choice Quartile Scores reveals Chi square equal to 28.56, significant at .004 level with Gamma equal to .12.

The analysis also endorses that for the Total Internal System but perhaps more so. (See Point No. 7 above.)

Age with Second Testing Structural Positioning on Lyon-Kite Graphics, Appendix IX-ii, is significant at .001 with Chi square equal to 58.17 and C equal to .31, Appendix IX-ii.

10. Pupils thirteen years old or younger tend more to assume quadrangle and clique positions. Those fourteen years old also tend to clique; however, many appear to be danglers. Those fifteen and older appear to be isolates, danglers, and file members.

Age with Second Testing Interaction Questions Mutual Choice Score Strengths supports the Lyon-Kite Structural Graphics findings. This would be expected as the Interaction Question Mutual Choice Score Strengths support the Lyon-Kite Graphics. Chi square is equal to 20.99, significant at .05 with Gamma equal to -.17, Appendix IX-iii.

Discussion re Sex and Age Structural Designations. Sex and age designations of the pupils seem to support concepts known from studies in growth and development; e.g. adolescent girls tend to cohere with one another socially more than do adolescent boys of the age range tested,<sup>37</sup> and younger adolescents seem to seek out and support peer cliques more frequently than do older adolescents perhaps because the latter are beginning to be more impressed with the opposite sex and thoughts of assuming adult responsibilities.<sup>38</sup>

Furthermore, the structural positionings on the Lyon-Kite Graphics endorse the age differentiations revealing more coherence in quadrangle or cliqueing assignments for those thirteen years old and younger, and a tendency for those fourteen years old and older to assume the less cohering positions of dangles, file members and isolates.

The finding that all age groups between eleven and fifteen appear to place one another in the upper and lower quartiles more frequently than in the middle quartiles in their internal interaction system does seem to point to some unbalance in the internal system which the pupils may be trying to meet. The ethnic differences showing up as they do in favor of non-Indian pupils through the pupils' placement of one another in the upper structural quartiles while Indian pupils are placed in the lower quartiles indicates what seems to be an important source of the unbalance, i.e. acceptance for the sample, as a whole, of non-Indian pupils and rejection of Indian pupils.

Ethnicity Designation Comparisons. Ethnicity is significant with all of the First Testing comparisons at the .05 level of significance except Membership in a Structural Position on the Lyon-Kite Graphics.

Even this is significant at the .12 level of significance, therefore it is included in the report. (See Appendixes X-i - X-iii.)

11. A pattern of directionality reoccurs for each of the Quartile score analyses during the First Testing. Non-Indian children tend to place in the upper three quartiles of group structure and Indian pupils in the bottom three quartiles. (See Appendix X-i, Pages 1 and 2.)

This is true for the classroom for:

- 11.1 Total Individual Quartile Scores or the External System.
  - 11.2 Total Mutual Quartile Scores of the Internal System.
  - 11.3 Interaction Individual Quartile Scores or the External Interaction System.
  - 11.4 Interaction Mutual Quartile Scores of the Internal Interaction System.
12. Ethnicity with First Testing Membership in a Structural Position on the Lyon-Kite Graphics reveals non-Indian children predominantly in clique and file membership categories, while Indian children are in cliques, are danglers, file members and isolates. This means non-Indian children tend to cohere more in the overall sample tested and although Indians cohere in some cliqueing, they also are more inclined to "outsider" structural positions.
  13. Directionality of First Testing Interaction Question Mutual Choice Score Strengths supports the findings in the foregoing Point 12. (Appendix X-ii, Ethnicity with First Testing Interaction Question Mutual Choice Score Strengths reveals Chi square equal to 13.64, significant at .003 with Gamma equal to -.25.)

All Second Testing comparisons of Ethnicity with the Structural variables are significant at least at the .01 level of significance.

14. Once again, the pattern of directionality reoccurs for each of the Quartile analyses. Non-Indian children tend to place in the upper three quartiles of group structure and Indian pupils in the bottom three quartiles. (See Appendix XI-1, Pages 1 and 2.)

This means the pattern is true for the classroom for:

- 14.1 Total Individual Quartile Scores or the External System.
- 14.2 Total Mutual Quartile Scores of the Internal System.
- 14.3 Interaction Individual Quartile Scores or the External Interaction System.
- 14.4 Interaction Mutual Quartile Scores of the Internal Interaction System.



15. Ethnicity with Second Testing Membership in a Structural Position on the Lyon-Kite Graphics reveals non-Indian children predominantly in clique and quadrangle memberships and dangler positions, and Indian children, for the most part, in dangler, isolate, file membership positions. This tells us that Indian children were even less likely to cohere during the Second Testing instance. (See Appendix XI-ii, where Chi square equals 18.32, significant at .005 with C equal to .18.)
16. Directionality of Ethnicity with Second Testing Interaction Question Mutual Choice Score Strengths supports the findings in the foregoing Point 15. (Appendix XI-ii, where Chi square equals 10.04, significant at .01 level and Gamma equal to -.23.)

Indian Pupils in Integrated - Non-Integrated Classroom Comparisons.

Indian integrated - non-integrated classroom comparisons are significant for all structural areas tested at least at the .01 level of significance except for first and second testing Interaction Question Mutual Choice Strengths. (See Table V and Appendixes XII and XIII.)

17. First Testing Quartile Analyses reveal a directionality of non-Integrated Indian pupils fairly evenly balanced among the quartiles, and Integrated Indian pupils veering towards the fourth or lower quartile position. (Appendix XII-i, Pages 1 and 2.)

This is true for:

- 17.1 Total Individual Quartile Scores or the External System.
- 17.2 Total Mutual Quartile Scores of the Internal System.
- 17.3 Interaction Individual Quartile Scores or the External Interaction System.
- 17.4 Interaction Mutual Quartile Scores of the Internal Interaction System.
18. First Testing Membership in a Structural Position on the Lyon-Kite Graphics reveals Integrated Indian pupils predominantly to be in isolate and dangler positions, and non-Integrated Indian pupils to be in clique, file or quadrangle membership positions. (See Appendix XII-ii where Chi square is equal to 48.97, significant at .0000 level with C equal to .53.)
19. Second Testing Quartile Analyses tend to support the findings of the First Testing Quartile Analyses as to directionality. Non-Integrated Indian pupils are fairly evenly balanced among the quartiles, and Integrated Indian pupils veer towards the fourth or lower quartile position. (Appendix XIII-i, Pages 1 and 2.)



This is true for:

- 19.1 Total Individual Quartile Scores or the External System.
  - 19.2 Total Mutual Quartile Scores of the Internal System.
  - 19.3 Interaction Individual Quartile Scores or the External Interaction System.
  - 19.4 Interaction Mutual Quartile Scores of the Internal Interaction System.
20. Integration with Second Testing Membership in a Structural Position on the Lyon-Kite Graphics reveals Integrated Indian pupils in isolate and dangler positions for the most part, and non-Integrated Indian pupils more frequently in triad and file memberships. (Appendix XIII-ii where Chi square is equal to 20.49, significant at .002 level, and C equal to .41.)

Discussion re Integrated - Non-Integrated Structural Bias Designations. The quartile analyses support the Lyon-Kite Graphics in pointing to classroom discrimination in favor of the non-Indian child and disfavoring the Indian. This gives cause for consideration of social discrimination factors against Indian pupils in the social climate of classrooms.

Types of bias against Indian pupils include:

- (i) Pupil Bias
- (ii) Teacher Bias
- (iii) Parental Bias

Pupil bias is indicated by the predominantly isolate and dangler positions of Indian pupils in the Lyon-Kite Graphics and by their "wistful" appeal for better classroom peer relationships in Part I Morale and Perceived Social Achievement findings. Teacher bias also is present, if the adjective survey in the Introduction of the study is given consideration. Teachers do tend to see non-Indian pupils as identifying positively with present day concepts of non-Indian industriousness, outgoing behavior, and social achievement, while they

look upon Indian pupils as being shy, withdrawn, non-aggressive and generally lacking in identification with accepted concepts of social success. Indian parental bias pro "the Indian way of life" seems present in Indian parental value views of Part II of the study.

Perhaps an immediate reaction would be that of looking at the findings in Points Eighteen (page 30) and Twenty (page 31), and concluding that perhaps non-integrated classrooms are the solution for social success of Indian pupils. This is supported by the fact that non-integrated Indian pupils do appear in stronger social positions: cliques and quadrangles in the first testing, and at least in triad or file memberships in the second testing. However, other portions of the present research point to the need for Indian pupils to gain education in integrated classroom settings. It will be recalled that Part I recommended integrated education but integrated education which allows for more than 5% Indian pupil population per class, experiments to see the optimum social arrangement for such classrooms with emphasis upon better Indian pupil adjustment, and with teachers especially trained to understand Indian pupil consummatory-liking orientations and needs; -- yet teachers with the ability to inculcate desire for and attitudes of work-success for better life adjustment. Part II also recommends integrated education for purposes of more positive value considerations and life adjustment perspectives of Indian pupils.

The consensus here in view of the other findings is to support integrated education both on and off reserves. The thwarted social structure adjustment of the children can be treated more as a symptom than as the root of the problem. The support for this contention lies

in other indications of social adaptation:

- (i) The more pupils interact with other pupils, the more the liking, providing bias is not being engendered by adult models in their lives.
- (ii) Better education, which should include social as well as academic education, does provide a transfer of ethnic differentiations to another reference base cognitively, that of equalized opportunity, and of its "hoped for" result: equalized achievement.<sup>40</sup> Tolerance of ethnic differences would be a by-product of such equalized achievements.
- (iii) Segregated education creates apartheid tendencies within a society which tend to fracture societal cohesion and enhance preferences for some groups over and beyond those of others. Societal anomie and/or chaotic conditions can result from over-emphasized segregated societal distributions.<sup>41</sup>

The foregoing is true only when other variants are held in balance,

i.e.:

- (i) There must be equal opportunity for children to interact with one another without bias.
- (ii) Education can be "better" only when teachers, curriculums, school environments and facilities are improved.
- (iii) When integrated education is made equally available and socially acceptable to the minority groups as well as to the majority.

The focus centers especially upon bias as the root of the problem, and not thwarted social structure adjustment of the children, the outcome of such bias. Questions emerge:

- (i) How can teachers be better disposed to act without bias?
- (ii) How can parents be encouraged to inculcate tolerance rather than value prejudices which discriminate against others?
- (iii) How can pupils be encouraged to regard one another with-

out discrimination?

Here is "social pollution" worthy of being attacked with strong cleaning brushes.

Recommendations in answer to these questions are:

- (i) Consideration for large enough numbers of Indian pupils per classroom to allow clique and quadrangle social structures to emerge for these pupils as well as for non-Indian pupils.

A suggested minimum is for at least a third of a classroom population of twenty-one to thirty pupils to be native.

Where pupils might have to be bussed to meet these designations, integrated education on reserves should definitely be considered. The appeal for the non-Indian pupil like that of the Indian pupil should be for better educational programs, teachers, practices, and facilities.

- (ii) The onus should be upon excellent teachers, "social teachers" so trained as to meet the "battleground of social bias" with skills for positive social climates.

The concept is to reduce discrimination from pupil to pupil, teacher to pupil, and pupil to teacher.

- (iii) Since parental understandings also influence such bias or discrimination, every effort should be made to encourage better parent-school-child interrelationships with consideration for allowing native parent representation on school boards.

- (iv) Appreciation for the positive contributions which native people are capable of making must be encouraged.

The reference here is to educated native peoples' consummatory-affectivity orientation applied to living in a modern world. This includes such abilities as the following which non-Indians frequently observe in working with them:

- (a) Abilities to space individual work drives with better consideration for tension reduction than the White man employs.
- (b) Enjoyment of aesthetic pleasures - nature, dancing, art.

- (c) Respect for a wise decision appropriately timed in leadership, rather than perhaps "the politically effective or best 'talked about' concept."
- (d) The spirit of togetherness that is a respect for what the individual is, and tolerance, perhaps even admiration, for his eccentricities whatever they may be.

These are needed perceptual frameworks to which non-Indians frequently pay esteem but which seem to elude practice. More working contacts with Indians, particularly with educated Indians, could help non-Indians to realize how Indian people view these functioning aspects of their lives.

#### Structural Quartile Position Changes Between First and Second Testings

Table VI reveals the children's changes in structural quartile positions from February to late May and early June, the time of the second testing with the designations: Ethnic; Indian and Non-Indians in Integrated Classrooms; Indians Only in Integrated - Non-Integrated Classroom Situations; and indexes used in Part I of the research: Morale, Perceived Social Achievement, Teaching Dimensions of Learning Behavior; and the sub-scales: Protestant Ethic, Family Orientation, and Conformity to Classroom.

Relatively little significance is shown for the concepts tested. Remmers points out that "if the sociometric test is given in too short an interval, memory will play an important part in increasing consistency of response."<sup>42</sup> For this reason, little quartile change was expected. The length of time was approximately three months between testings.

Table VI  
Changes in Structural Quartile Position  
from First to Second Testings

	Non-Indian - Indians	Integrated Classroom only Non-Indian - Indians	Indians only Integrated - Non-Integrated	Teacher Morale	Peer Morale	School Morale	School Dropout Morale	School Anxiety Morale	Self Expressiveness PSA	Self Perception PSA	Significant Others Family PSA	Significant Others Neighborhood Friends PSA	Learning Others PSA	Learning Relevance PSA	Learning Self-Other PSA	Expressive TDLB	Expressive Help TDLB	Expressive-Liking-Task TDLB	Authority TDLB	Authority Task TDLB	Task TDLB	Teacher Pupil Interaction TDLB	Teacher-Pupil Task TDLB	Small Group TDLB	Precentent Ethic	Family Orientation	Conformity to Classroom
Quartile Change:	.014	-.04	.09	.01	.007	.008	.06	-.04	.08	.09	.03	-.05	.01	-.07	-.01	.06	-.05	.01	.35	-.03	.004	-.04	-.03	.03	.02	-.03	.01
Total Group Questions -	1.45	.30	.62	.42	5.24	1.71	2.92	6.63	4.57	3.47	1.80	3.88	9.26	1.91	14.6	1.63	2.53	1.07	9.6	7.09	1.44	6.13	1.31	7.33	3.35	3.29	23.1
Individual Choice	.48	.85	.73	.98	.26	.78	.57	.15	.33	.48	.77	.42	.05	.75	.005	.80	.63	.89	.008	.13	.83	.18	.85	.11	.18	.50	.0001
Quartile Change:	.08	-.01	.18	.004	-.01	.05	-.06	.03	-.02	.10	-.04	-.03	-.01	-.11	-.08	.02	-.04	.11	.16	-.02	.03	-.03	-.03	.13	-.08	.05	.01
Total Group Questions -	1.01	1.01	3.71	1.34	4.26	3.94	7.12	5.02	1.32	7.01	2.91	3.70	1.35	5.52	6.52	1.2	2.58	8.92	2.18	8.10	.52	12.43	8.12	10.12	1.38	7.44	5.51
Mutual Choice	.60	.60	.15	.85	.37	.41	.12	.28	.85	.13	.57	.44	.85	.23	.16	.86	.42	.06	.33	.08	.97	.01	.08	.04	.49	.11	.23
Quartile Change:	.05	-.04	.14	.009	-.04	-.04	.02	.007	.08	.04	.006	-.08	-.10	.03	.05	.11	-.07	.04	.13	-.05	.04	-.06	-.07	.10	-.02	-.00	-.06
Interaction Group	.36	.90	1.98	2.07	6.62	1.01	3.8	4.44	3.73	1.67	2.12	2.96	9.41	2.44	6.36	7.26	3.22	1.97	1.47	5.21	3.00	3.10	1.81	6.12	.12	2.48	7.08
Questions -	.83	.63	.37	.72	.15	.90	.42	.34	.44	.79	.90	.56	.05	.65	.17	.12	.52	.73	.47	.26	.55	.54	.77	.19	.93	.64	.13
Individual Choice																											
Quartile Change:	.00	-.04	.11	.01	.15	.08	-.08	.03	-.01	.08	-.11	-.02	-.06	-.01	-.02	-.01	-.04	.06	-.008	-.03	.09	-.07	-.05	.09	.12	.06	.01
Interaction Group	.01	.12	.46	2.28	10.21	2.45	7.85	8.07	2.60	2.34	11.67	5.31	7.26	2.30	2.12	2.55	1.25	4.43	1.42	3.12	7.73	5.15	3.15	6.73	3.9	5.8	10.08
Questions -	.99	.93	.79	.68	.04	.65	.09	.08	.62	.63	.02	.25	.12	.67	.71	.63	.86	.35	.49	.53	.10	.27	.53	.15	.13	.21	.03
Mutual Choice																											

\*Upper number in each cell refers to Gamma,  
middle number to Chi-square equivalence, and  
lower number to  $\chi^2$  Alpha Probability.



Some significant areas in pupil and teaching behavior are apparent; however, no significant relationships exist between quartile changes and Ethnicity, Integrated Classrooms, Indian Only in Integrated - Non-Integrated Classroom Situations, Protestant Ethic, and Family Orientation.

Changes in Structural Quartile Position from First to Second

Testing with Morale Indices.\* Relationships with the Morale scales are significant only in regards to the internal system<sup>43</sup> Mutual Choice designations to the Interaction Group of Questions with Peer Morale at the .04 level of significance; however, Mutual Choice designations of the Interaction Group of Questions also are significant with School Dropout Morale at the .09 level of significance, and with School Anxiety Morale at .08 level. (See Appendixes XIV-i and XIV-ii.)

These analyses provide interesting insights into structural change in the classroom. The pupils' Peer Morale perception seems to indicate little or no endorsement of peers by those who are upwardly mobile or stable, while those who are downwardly mobile seem inclined to be split between endorsement and non-endorsement of their peers. (See Appendix XIV-i, Interaction Mutual Choice Quartile Changes with Peer Morale, where Chi square equals 10.21, significant at .04 level, and Gamma equal to .15.) When one is moving upwards in peer esteem or even "holding one's own" stably in group structure, there may be less need to endorse peers highly. When one is structurally moving downwards, a feeling of confusion with one's peers may create morale frustrations.

If one is thinking about dropping out of school, an illusion of upward mobility from "a bad situation," i.e. "school," may occur and

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\*See Part I of this research for Morale Indexes.

bring about a prestige euphoria felt by one's peers -- a glamour which could actually serve to help move one upwards structurally. Such may account for the heavier endorsement of school dropout morale by those who are upwardly mobile. Those who are downwardly mobile or stable tend to endorse school dropout at least sometimes. These children may be reacting to everyday stresses of attempting to succeed in school. (See Appendix XIV-ii, Interaction Mutual Choice Quartile Changes with School Dropout Morale, where Chi square is equal to 7.85, significant at .09 level and Gamma is equal to -.08.)

School anxiety is felt at least sometimes by all who are involved in the structural interaction designations whether they are stable, downwardly or upwardly mobile. (Appendix XIV-i, Interaction Mutual Choice Quartile Changes with School Anxiety Morale where Chi square is equal to 8.07, significant at .08 level and Gamma is equal to .03.)

Changes in Structural Quartile Position from First to Second Testing with PSA Indexes.\* Perceptual relations with one's peers in learning are inherent in classroom group structure, therefore some significance with Learning-Others and Learning-Self-Others was expected. Both the internal and external systems are involved with these indexes. (See Appendix XV-i and XV-ii.)

Total Group Individual Choice Quartile Changes (the external esteem system) are significant with Learning Others at .05 level of significance (Appendix XV-i, where Chi square is equal to 9.26 and Gamma is .01). Those who are upwardly mobile tend to endorse their peers, while those who are stable or downwardly mobile endorse them "sometimes."

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\*For Perceived Social Achievement (PSA) indexes, see Part I of this research.

External system Interaction Group Mutual Choice Quartile Changes are significant with Learning-Others at the .05 level. All groups, whether upwardly, downwardly or stable seem to endorse others who learn with them "at least sometimes" as would be expected (Appendix XV-i with Chi square equal to 9.41 and Gamma equal to  $-.10$ ).

The external system Total Group Individual Choice Quartile Changes are significant with Learning-Self-Others at the .005 level revealing endorsement of self-to-others' perceptions by all socially mobile groups "at least sometimes" (Appendix XV-ii with Chi square equal to 14.64 and Gamma equal to  $-.01$ ).

Internal system Interaction Group Mutual Choice Quartile Changes are significant with Significant Others: Family at the .02 level of significance (Appendix XV-ii with Chi square equal to 11.67 and Gamma equal to  $-.11$ ). All children tested seem to link structural position in their learning group to their family perspective "at least sometimes." The children may be looking to their families for status support in their learning groups.

Changes in Structural Quartile Positions from First to Second Testing with TDLB Indexes.\* The external structural system of the classroom seems linked to pupil perceptions of authority dimensions of teaching behavior. Whether pupils are stable, downwardly or upwardly mobile, there tends to be strong endorsement of authority teaching behavior. (See Total Group Individual Choice Quartile Changes with Authority TDLB, Chi square equal to 9.60, significant at .008 level with Gamma of .35, Appendix XVI-i, Page 1).

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\*For Teaching Dimensions of Learning Behavior (TDLB) indexes, see Part I of this research.

The internal structural system as expressed by Total Group Mutual Choice Quartile Changes reveals relationships between quartile movement and stability with Authority-Task TDLB "at least sometimes" (Appendix XV-i, Page 2, with Chi square equal to 8.12, significant at .08 level with Gamma equal to  $-.02$ ).

Teacher-Pupil-Interaction TDLB, significant at .01 level, also is related positively to internal system Mutual Choice Quartile Changes "at least sometimes" for those who are stable or upwardly mobile; and those who are downwardly mobile seem to endorse this teaching dimension less (Appendix XVI-i, page 1, with Chi square equal to 12.42 and Gamma equal to  $-.03$ ). Children who are downwardly mobile structurally may be feeling some lack of identification with the teacher in the classroom interaction.

Those who are upwardly mobile in the internal system tend more to endorse Small Group teaching practices while those who are downwardly mobile seem to give less endorsement to such behaviors (Appendix XVI-i, Page 2, with Chi square equal to 10.12, significant at .03 level with Gamma equal to  $.13$ ). This might have been expected as one who is moving downward structurally probably would not want to participate in teacher planned small group situation.

Teacher-Pupil-Task dimensions are related also to the internal system Mutual Choice Quartile Changes with all children endorsing Teacher-Pupil-Task classroom behaviors "at least sometimes," and those who are downwardly mobile being slightly less certain of this (Appendix XVI-ii with Chi square equal to 8.12, significant at .08 level, with Gamma equal to  $-.03$ ).

The internal system Mutual Choice Quartile Changes are related to Expressive-Liking-Task teaching dimensions with all the children endorsing these "sometimes," and those who are downwardly mobile supporting the

dimensions slightly more often than those who are stable or upwardly mobile (Appendix XVI-ii, Chi square equal to 8.92, significant at .06 level and Gamma equal to .11). Children who are downwardly mobile evidently seek Expressive-Liking teaching behaviors of their teachers.

Authority, Authority-Task, Small Group, and Expressive-Liking behaviors of teachers then do bear some relation to classroom group structure changes.

Changes in Structural Quartile Position from First to Second Testing with Conformity to Classroom. Some relation to classroom conformity or adjustment might be expected for those who move upward in the external system group structure; significant at .0001 level. Both those who move up and down admit to classroom conformity "at least sometimes" (Appendix XVII, Chi square equal to 23.11 and Gamma equal to .01). Those who move up may be seeking teacher and peer approval for their conformity. Those who move down may be grasping at this means to stay their perception of "lost" ground in the group. What is interesting is that those who are stable seem to give more "non-endorsement" indications to classroom conformity. Perhaps there is not a need to evidence so much conformity to maintain a position stably.

A check with the Interaction Group Mutual Choice Quartile Changes and Classroom Conformity, significant at .03 level, gives further understandings (Appendix XVII, Chi square equal to 10.08 and Gamma equal to .01). Those who are downwardly mobile or stable tend less to endorse this concept. Those who are upwardly mobile endorse it at least sometimes. Disenchantment with conformity may be present for those downwardly mobile or stable. On the one hand for those losing their positions, there may be a feeling of "What's the use?", even to the point of deviancy. For those



who are stable, there simply will not be a need to express conformity, although it may exist.

Summary of Structural Quartile Position Changes. The Structural

Quartile Position Changes reveal the following indications for consideration:

- (i) When one is structurally moving downwards, a feeling of confusion with one's peers may create morale frustration.
- (ii) If one is thinking about dropping out, an illusion of upward mobility from "a bad situation," i.e. school, may occur and bring about a prestige euphoria felt by one's peers - a glamour which could actually serve to help move one upward structurally. Such may account for the heavier endorsement of school dropout morale by those who are upwardly mobile. Those who are downwardly mobile or stable tend to endorse school dropout at least sometimes. These children may be reacting to everyday stresses of attempting to succeed in school.
- (iii) School anxiety is felt by all the pupils involved in the structural interaction designations at least sometimes no matter what their quartile position.
- (iv) Those who are upwardly mobile seem to endorse others who learn with them in the external system of the classroom more often. Those stable or downwardly mobile endorse them sometimes.
- (v) All children tested seem to link their integrativeness or structural position in their learning group to their family perspective, - as though they were looking to their families for status support in their social groups.
- (vi) Children who are downwardly mobile structurally may feel some lack of identification with the teacher in classroom interaction.
- (vii) One who is moving downwards structurally probably would not want to participate in teacher planned small group situations.
- (viii) Children who are downwardly mobile evidently seek Expressive-Liking teaching behaviors of their teachers.
- (ix) Whether pupils are stable, downwardly or upwardly mobile, there tends to be strong endorsement of authority teaching behaviors. Children perceive changes in group structure to be related to authority dimensions of teaching behavior.



- (x) Classroom conformity does not seem to be endorsed by those who are stable in classroom structure. Perhaps there is not a need to evidence much conformity to maintain a position stably or there may be no need to express it even if it does exist.
- (xi) Disenchantment with conformity seems to be present for those who are downwardly mobile. There may be a feeling of "What's the use?" for such pupils, even to the point of deviancy.

#### Structure with Interaction -- First Video Analysis and Testing

A concept frequently given subjective endorsement by teachers and administrators is that interaction in the classroom and group structure are related. Perhaps the concept even extends itself to include the construct that group structure is a result of interaction processes. By such a position as this, it might be contended that if the native child has trouble in interaction due to his shyness or unwillingness to talk, then his place in the group structure of the classroom could be a result of his lower interaction rate of exchange. It seemed feasible to relate group structure with interaction to examine areas where these two measurements of group identification are related.

Table VII relates the two: structure and interaction for the First Testing Instance of Group Structure and the First Video Analyses.\* It will be recalled that the first testing assessed only signal or non-verbal elements of interaction. Reuesch<sup>44</sup> in explanation of non-verbal language as opposed to verbal language in therapy delineates characteristics

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\*Only the children video-taped were analyzed. Since the maximum of those video-taped per classroom was eight, the numbers involved for each of these Chi square analyses is small. (See Appendixes XVIII - XXII.)

referring to perception, evaluation and transmission as follows:

Non-Verbal	Verbal
Non-verbal denotation can be perceived by distance and proximity receivers alike; for example, action may be not only seen and heard, but may also produce physical impact.	Verbal denotation can be perceived by distance receivers only; that is, it can only be heard or read.
Non-verbal language influences perception, coordination, and integration, and leads to the acquisition of skills.	Verbal language influences thinking and leads to the acquisition of information.
In non-verbal language, evaluation is tied to appreciation of similarities and differences.	In verbal language, evaluation is governed by principles of logic.
In non-verbal language, expression may be skilled or unskilled, but regardless of its quality, it is usually understandable.	In verbal language, expression must be skilled, otherwise it is unintelligible.
The understanding of non-verbal denotation is based upon the participant's empathic assessment of biological similarity; no explanation is needed for understanding what pain is.	The understanding of verbal denotation is based on prior verbal agreement; the word "pain" differs from the German word "Schmerz" or the French word "douleur", and the understanding of the significance of these words is bound to such previous arrangements. <sup>45</sup>

In the present study, signal implications were studied in reference to bodily action which connoted initiation or reception of activity to peers: both Indian and non-Indian; to the teacher; agreement with teacher concept as evidenced by a nod, smile or recognition facially of interest, and positive and negative socio-emotional indications. An error element was included to allow the two raters viewing the video record to talley an error mark when in doubt as to intent or when the camera may have recorded too much light, not enough light or insufficient picture. The average of the two raters' talleys was taken for

each child per category. (See Appendix III for rating form.) No attempt was made to get at vocal elements such as change in tone of the speaker, because the video tape recordings did not accurately distinguish a sufficient number of vocal elements.

Birdwhistell in a discussion of verbal and non-verbal signals supports the use of signal understandings: "In address or reference, the head, a finger, the hand or a glance may be moved so that a distal extension of the movement can be interpreted as leading toward, actually or symbolically, the object or event referred to."<sup>46</sup>

Table VII reveals some relationship of structure and non-verbal interaction. Perhaps even more interesting than the areas which are significant in Table VII, are those which are not significant. A large amount of signal interaction and structure analyzed apparently is not related to any significant degree.

Table VII findings explained:

1. Those higher in the external system structural analysis seem to initiate more signal action to non-Indian peers than do those lower in the structural analysis.

Total Group Structure Based on Individual Choices with Initiation of Action by the Children to non-Indian Peers is significant at the .02 level with a Q Coefficient of  $-.52$ , Appendix XVIII.\*

2. Children in the internal system also seem to initiate more signal action to non-Indian peers when they are higher in the structural analysis.

This analysis seems to support Analysis One. Total Group Structure Based on Mutual Choices with Initiation of Action by Children to Non-Indian Peers is significant at .03 level with a Q Coefficient of  $-.50$ , Appendix XVIII.

3. Those high in interaction external system structural position tend to receive higher signal action from their peers, and those who are lower seem to receive lower signal action.

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\*Findings 1-8 are based on Fisher Exact Tests. Structure portions of Findings 3-6 are based upon structural questions which bear interaction connotations.

Table VII  
First Group Structure with First  
Video Analysis (Interaction  
Based on Symbols Only)

	Total Initiates Action	Total Receives Action	Initiates Action To Indian Peers	Receives Action From Indian Peers	Initiates Action To Non-Indian Peers	Receives Action From Non-Indian Peers	Initiates Action To Teacher	Receives Action From Teacher	With Teacher Concept	Socio-Emotional Positive Action	Socio-Emotional Negative Action	Error in Scoring	Total for All Interaction
Total Group Structure Based on Individual Choices (Quartile Positions)	-.21 .66 N/A*	.35 .62 .16	-.22 .92 .35	-.25 .60	-.52 .14 .02	-.23 .75 .22	-.27 .99 .48	-.25 .91 .33	-.20 .91 .66	.24 .94 .36	1.0 .85 .66	-.13 .88 N/A	N/S
Total Group Structure Based on Mutual Choices (Quartile Positions)	-.16 .79 N/A	.08 .99 .49	-.11 .99 .48	-.14 .98 .49	-.50 .20 .03	-.31 .55 .13	-.45 .90 .33	-.25 .91 .33	-.20 .91 .66	.17 .98 .48	1.0 .55 .43	.13 .86 N/A	-.18 .91 N/A
Interaction Question Probed Structure--Individual Choices (Quartile Positions)	.03 .99 N/A	.40 .50 .12	-.45 .49 .11	-.50 .37 .08	-.57 .08 .01	-.07 .99 .47	.06 .93 .66	-.11 .99 .74	.33 .99 .54	-.36 .79 .25	1.0 .63 .25	-.12 .89 N/A	-.31 .31 N/A
Interaction Question Probed Structure--Mutual Choices (Quartile Positions)	-.15 .83 N/A	.24 .84 .28	.06 .99 .55	-.25 .90 .32	-.29 .69 .19	-.12 .96 .39	-.86 .22 .04	-.71 .09 .01	-.71 .81 .26	-.20 .98 .43	1.0 .55 .43	.31 .34 N/A	-.12 .89 N/A
Structural Position; e.g. Isolate, Clique Member, etc.	.12 .93 N/A	----- INSUFFICIENT DATA TO ALLOW ANALYSIS -----										.19** .60 N/A	.26 .17 N/A
Interaction Questions' Mutual Choice Strengths	.18 .76 N/A	-.01 .96 .60	.46 .46 .10	.41 .54 .13	.33 .56 .14	.06 .99 .50	1.0 .06 .008	.43 .68 .19	.63 .90 .35	.62 .32 .06	-1.0 .64 .18	-.14 .86 N/A	.28 .40 N/A
Total Group Structural Change 1st and 2nd Testings - Based on Individual Choices Video-taped	.22 .41 ***	-.16 .70	.17 .75	.06 .88	-.13 .60	-.05 .22	-.52 N/A	.14 .02	1.0 N/A	.19 .77	.04 N/A	.16 .59	.22 .38
Total Group Structural Change 1st and 2nd Testings - Based on Mutual Choices Video-taped	.13 .27	-.55 .04	.30 .51	.05 .16	-.11 .44	-.38 .14	-.55 N/A	.11 .71	0.0 N/A	.22 .54	-.35 N/A	.01 .16	-.07 .82

\*N too large to calculate  
Fisher's Exact Probability

\*\*Contingency Coefficient  
based on  $X^2$

\*\*\* Top number refers to Gamma,  
lower number to Chi Square  
Probability.

Top number in each cell refers to  
Q coefficient, middle number to  
Yates  $X^2$  Probability, and lower  
number to Fisher's Exact Probability.

Interaction Question Probed Structure Based on Individual Choices with Receives Action from Indian Peers is significant at .08 level with a Q Coefficient of .50, Appendix XIX.

4. Children who are higher in interaction external system structural position seem to initiate higher signal action to their peers, and those who are lower appear to initiate lower signal action.

Interaction Question Probed Structure Based on Individual Choices with Initiates Action to Non-Indian Peers is significant at .01 level with a Q Coefficient of -.57, Appendix XIX.

5. Those who are higher in interaction internal system structure seem to initiate higher signal action to their teacher, and those who are lower tend to initiate lower signal action to their teacher.

Interaction Question Probed Structure Based on Mutual Choices with Initiates Action to Teacher is significant at .04 level with a Q Coefficient of -.86, Appendix XX.

6. Children who are higher in interaction internal system structure tend to receive higher signal action from their teacher, and those who are lower tend to receive lower signal action from their teacher.

Interaction Question Probed Structure Based on Mutual Choices with Action Received from Teacher is significant at .01 level with a Q Coefficient of -.71, Appendix XX.

7. Checking Number Six findings above by mutual choice strengths (those which served as the bases for the kite graphics, not quartile positions but actual strengths), it appears that children who are higher in structural position initiate low signal action to the teacher and those lower in graphic position initiate higher signal action to the teacher.

This finding supports the concept that graphic relationships endorse efforts of less prominent pupils to reach their teachers. Interaction Questions' Mutual Choice Strengths with Initiates Action to the Teacher is significant at .008 level with a Q Coefficient of 1.00, Appendix XXI.

8. Both children low and high in graphic structure strengths realize low positive socio-emotional signal action.

This finding may indicate another type of instrument is needed to assess socio-emotional strengths. Interaction Questions' Mutual Choice Strengths with Socio-Emotional Position Action is significant at .06 level with a Q Coefficient of .62, Appendix XXI.



9. Children in the external system of the classroom who are stable in their structural positions tend to receive more action from their teachers than do those who are downward or upward in structural mobility.

Total Group Structural Changes, First and Second Testings (Based on Individual Choices of those Video-taped) with Receives Action from Teacher is significant at .02 level with Chi square equal to 7.15 and a Gamma of .14, Appendix XXII.

10. Those in the internal classroom system who are upwardly mobile or stable structurally tend to receive less total action from classroom occupants. Those who are downwardly mobile seem to receive slightly more total action.

Total Group Structural Changes, First and Second Testings (Based on Mutual Choices of those Video-taped) with Total Receives Action is significant at .04 level with Chi square equal to 6.02 and a Gamma of -.55, Appendix XXII.

The foregoing seems to support the concept that those in higher esteem positions try harder in their interaction patterns. The children in these positions are trying to reach not only other children in the classroom but their teacher as well.

Ethnicity, Indians in Integrated -- Non-Integrated Classes, and Integrated Classrooms Only with First Video Interaction Analysis

#### Ethnicity and Interaction: First Video Analysis

Table VIII presents the First Video Interaction Analysis, that of signal interaction, in relation with Ethnicity, Indians in Integrated and Non-Integrated Classes, and Integrated Classrooms Only. Ethnicity appears to be related with action initiated to Indian peers, to non-Indian peers and socio-emotional behavior. The findings reveal:

1. Indian pupils initiate higher action to Indian peers than do non-Indian pupils.

Ethnicity with Initiates Action to Indian Peers reveals a Fisher Exact Test significance of .05 with a Q Coefficient of .77, Appendix XXIII.



2. Indian pupils initiate lower action to non-Indian peers than do non-Indian pupils.

Ethnicity with Initiates Action to Non-Indian Peers shows a Fisher Exact Test significance of .07 with a Q Coefficient of  $-.47$ , Appendix XXIII.

3. Both Indian and non-Indian pupils tend to initiate low positive socio-emotional behavior.

Ethnicity with Positive Socio-Emotional Behavior reveals a Fisher Exact Test significance of .03 with a Q Coefficient of  $.69$ , Appendix XXIII.

This analysis tells us that Indian pupils tend to talk to Indian pupils and non-Indian pupils to non-Indian pupils; something which teachers and administrators who deal with Indian pupils and non-Indian pupils in integrated classrooms admit. Once again, we must consider this finding in relation to the groups as a whole. Individuals in the classroom groups might react differently. Some individual Indian pupils may tend to initiate action to and receive action from non-Indians and vice versa.

In Table VIII, it can be noted that Indians in Integrated and Non-Integrated Classes is significant with Action Initiated to Indian Peers, Action Received from Indian Peers, Positive Socio-Emotional Behavior, and Total of All Interactions. These findings include:

4. Integrated Indian pupils tend to initiate less action to Indian peers, and non-integrated Indian pupils seem to initiate more action to Indian peers.

Indians in Integrated -- Non-Integrated Classes with Action Initiated to Indian Peers is significant at .02 level with Chi square equal to 4.62 and Q Coefficient equal to  $.74$ , Appendix XXIV.

5. Indians in integrated classes receive less action from Indian peers than do Indians in non-integrated classes.

Table VIII

Ethnicity, Indians in Integrated - Non-Integrated Classes, and Integrated Classrooms Only  
with First Video Interaction Analysis

	Total: Initiates Action	Total: Receives Action	Initiates Action to Indian Peers	Receives Action from Indian Peers	Initiates Action to Non-Indian Peers	Receives Action from Non-Indian Peers	Initiates Action to Teacher	Receives Action from Teacher	With Teacher Concept	Socio-Emotional Positive Action	Socio-Emotional Negative Action	Error Allowed for in Coding	Total of All Interactions
Ethnicity: Non-Indian - Indian	.15* .84 N/A	.13 .98 .42	.77 .27 .05	.40 .87 .30	-.47 .35 .07	-.08 .99 .47	-.27 .99 .48	-.16 .98 .43	-.20 .91 .66	.69 .18 .03	-1.0 .71 .22	-.19 .71	.19 .68 N/A
Indians in Integrated-- Non-Integrated Classrooms	-.23 .89 .32	-.33 .92 .35	.74 .09 .02	.86 .02 .002	INVALID MATCH		-1.0 .95 .57	.42 .91 .35	-1.0 .99 .67	.89 .04 .007	** N/A	-.34 .71 .20	.50 .37 .07
Integrated Classrooms Only: Non-Indians - Indians	.25 .71 .20	.27 .88 .88	.42 .98 .43	-.42 .98 .91	-.43 .45 .10	-.04 .99 .54	-.07 .91 .75	-.33 .87 .89	.14 .86 .72	-.01 .84 .32	-1.0 .84 .32	-.05 .99 .49	-.11 .96 .39

\*Top number in each cell represents Q Coefficient;  
middle number, Chi-square level of significance;  
and lower number, Fisher's Exact Test level of  
significance.

\*\*All Indian children tested scored zero.

This finding is spurious as there are many less Indian peers in non-integrated classes from whom Indian pupils can receive action. Indians in Integrated -- Non-Integrated Classes with Action Received from Peers is significant at .002 level with Chi square equal to 8.29 and a Q Coefficient of .86, Appendix XXIV.

6. Indians in integrated classes engage in less positive socio-emotional behavior than do Indians in non-integrated classes.

Indians in Integrated -- Non-Integrated Classes with Positive Socio-Emotional Behavior is significant at .007 level with Chi square equal to 5.99 and a Q Coefficient of .89, Appendix XXIV.

7. Indians in non-integrated classes engage in more total interaction than do Indians in integrated classes.

Indians in Integrated -- Non-Integrated Classes with Total of all Interaction is significant at .07 level with Chi square equal to 1.97 and a Q Coefficient of .50, Appendix XXIV.

These findings reinforce the need to consider placement of more Indian pupils in integrated classes so that the native children may have people with whom they can identify and interact. With interaction initiated and received from one's own kind endorsed by segregated classes, expectancies re ethnic mores can become reinforced to the place where those who join integrated classes when they are older may find it difficult to adjust. Some statements from teachers tend to support this for Grades 7 - 9:

"The Indian students do not identify with me as do non-Indian students. They are reserved and non-aggressive in their relationships with me as a teacher and administrator. In their social identification with their peers, they present a gap - that is, they do not have the outward, friendly relationship with the non-Indian students. /They have/ mainly a negative attitude."

"Social identification with peers in the classroom<sup>7</sup> depends upon the age you receive these pupils. If they start in your school in Grade One, there is very little difference between the Indian child and the non-Indian child. If you take on a student in junior high, he has a terrific problem (generally) identifying with the school and with peers."

A further note seems necessary at the close of the first video analysis. Table VI of Part III reveals an examination of Structure finding relationships with Student Morale, Perceived Social Achievement, Teaching Dimensions of Learning Behavior and the three sub-scales: Protestant Ethic, Family Orientation, and Conformity to Classroom. The relationship between the first video analysis and these elements was examined but found to be negligible. Because of this and since the second video analysis gave less significant findings (refer to Table IX), the Morale, Perceived Social Achievement, Teaching Dimensions of Learning Behavior and three sub-scale relationships were not further explored. It also was concluded that teacher and pupil interaction relationships might better be studied by direct rating of interactions in normal classroom situations.

The second video analysis findings were not examined in relation to the second group structure findings because the panel video sessions created what might be considered not an ordinary structural classroom situation.

#### Ethnicity and Interaction: Second Video Analysis

The second video analysis involved a special arrangement for the classes. As explained previously, the pupils who were video-taped

during the first video-analysis were brought up in front of the class to serve as a panel to answer questions asked by the teacher following the teacher's reading of the story-stem, (See Appendix IV).<sup>47</sup> Although the entire class was not excluded from answering the questions asked by the teacher following the story-stem, only the answers given by the children involved in the panel were video-taped. This method of analysis was necessitated by the limitations of the port-a-pack video equipment which did not allow framing and sound taping of the entire class.

This means of analysis employed to ascertain the children's responses to the story-stem questions posed by the teacher involved a rating of the video-tapes by two raters of like academic background: graduate university students, who viewed the video tapes and tallied their understandings of the children's use of restricted and elaborated codes. The sums of their ratings were then averaged to gain final consensual analyses. The analyses followed Bernstein's definitions of elaborated and restricted codes, specifically those designated in the article by Basil Bernstein, "Elaborated and Restricted Codes: Their Social Origins and Some Consequences," in Alfred G. Smith, Communication and Culture, N.Y.: Holt, Rinehart and Winston, 1966. In brief, restricted codes were considered to be statements of global, concrete, descriptive or narrative connotations. Elaborated codes were considered to be statements with discrete intent, with expectations of separateness and differences from others and nuances of interests. Elaborated codes give indications of "pre" and

"self" editing of statements: "self" editing means "no problem of self because the problem is not relevant -- 'self' is verbally differentiated." Appendixes V-i and V-ii show the work-up sheets used by the raters to gain the restricted and elaborated code tallies from the video tapes. Appendix V-i was used to support the total analyses for: restricted and elaborated codes, "no answer," and number of message units or meaningful statements made by the pupils. Appendix V-ii provided a means for tallying the pupils' answers to Questions Two through Eight asked by the teacher, which followed the story stem and which are given in Appendix IV. The first question, the "pony" question was considered to be an introductory "warm-up" for the children and therefore was not analyzed.

Table IX, which follows, provides relational significances between the second video analysis and Ethnicity, Indian Pupils in both Integrated and Non-Integrated Classrooms, and Integrated Classrooms Only which contained, of course, both Indian and non-Indian pupils. As the table indicates, very few relevant significant differences, significant at least at the .05 level, were found. In general, the analyses which were significant reveal a higher level of elaborated code for native children in integrated classrooms, although these children do fall below the abilities of non-Indian pupils when the Indian and non-Indian elaborated code analysis is considered.

Specifically, Table IX reveals:

1. Non-Indian pupils express more elaborated code responses than do Indian pupils.



Table IX-i

Restricted and Elaborated Codes:  
 Ethnicity, Indians in Integrated - Non-Integrated Classes, and  
 Integrated Classes Only with Second Video Interaction Analysis

	Total Restricted Code	Total Elaborated Code	Total No Answer	Total Number of Message Units	Distance-Space Questions Restricted Code	Distance-Space Questions Elaborated Code	Time Questions Restricted Code	Time Questions Elaborated Code
Ethnicity	* -.18 1.2 .52	* -.57 $\chi^2$ .03 F .003	.49 .44 .10	* -.10 1.10 .57	.002 .96 .62	0.0 .94 .63	.23 .88 .31	-.02 .83 .73
Indians in Integrated -- Non-Integrated Classrooms	* -.45 8.94 .011	* .30 $\chi^2$ .90 F .32	-.57 .42 .10	* -.50 4.76 .09	.09 .97 .60	-.39 .99 .48	-.05 .93 .73	1.0 .99 .54
Integrated Classes Only: Non-Indians -- Indians	* .02 2.04 .36	-.65 .03 .004	.66 .19 .03	* .15 1.02 .59	-.03 .96 .60	.11 .99 .75	.25 .93 .35	-1.0 .97 .65

Top number in each cell represents  
 Q Coefficient, middle number  $\chi^2$  Yates,  
 and lower number Fisher Exact Test  
 level of significance.

\* Top number in each cell represents Q Coefficient, middle  
 number Chi square level of significance, and lower number  
 Fisher Exact Test level of significance.

Ethnicity with Total Elaborated Code shows a Chi square of 8.19, significant at .03 level with a Q Coefficient of -.57, Appendix XXV.

2. Both Indian and non-Indian pupils found the content questions relevant to "Where do Indian people stop using Indian knowledge and start using white man's knowledge?" difficult to answer. Of those who gave answers to these questions, both Indian and non-Indian pupils tended to use less elaborated code, with non-Indian pupils tending slightly more towards more elaborated code usage.

Ethnicity with Content Questions - Elaborated Code reveals a Chi square of 3.11, Yates Correction of 1.50 with Fisher Exact Test significance of .05 and a Q Coefficient of -1.0, Appendix XXV.

Particular responses given to Question 2 content questions included

Question 2a. When did George use Indian knowledge?

"When he was on the reservation."  
 "When he made his home in the woods."  
 "When he was dreaming in the story."  
 "When he was smaller."

Question 2b. When would he use the white man's knowledge?

"In school." (In boarding school.)  
 "In the city."  
 "When he was with white people."  
 "When the guy stopped the car for him [in the story]."  
 "When he had to use the white man's language."

Question 2c. How have the cooperatives helped Indian people?

"With their crops."  
 "To get better farms."  
 "To improve farming methods."

(Note: In two instances the teacher explained that cooperatives on the reserves were organizations formed by the bands to plan and share work, equipment, and business ventures.)

Question 2d. How has modern machinery helped Indian people?

"With their crops because they have better farm machinery."  
 "Gives them bigger crops."  
 "Makes their work smoother and easier."  
 "Helps them build better houses."  
 "They can hear the news: radio and TV."

Table IX-ii

Restricted and Elaborated Codes:  
 Ethnicity, Indians in Integrated - Non-Integrated Classes, and  
 Integrated Classes Only with Second Video Interaction Analysis

	Content Questions Restricted Code	Content Questions Elaborated Code	Future Verbs Questions Restricted Code	Future Verbs Questions Elaborated Code	Past Verbs Questions Restricted Code	Past Verbs Questions Elaborated Code	Present Verbs Questions Restricted Code	Present Verbs Questions Elaborated Code
Ethnicity	* .36 2.5 .28	-1.0 .47 <u>.05</u>	-.12 .96 .40	-1.0 .94 .65	-.15 .97 .41	.50 .95 .36	-.22 .82 .26	.76 .66 .19
Indians in Integrated -- Non-Integrated Classrooms	.15 .19 .49	Insuf. Data	-.25 .98 .44	Insuf. Data	.44 .94 .36	-1.0 .99 .50	.41 .82 .27	-1.0 .68 .33
Integrated Classes Only: Non-Indians -- Indians	-.29 .69 .19	-1.0 .76 .29	-.04 .98 .66	-1.0 .84 .76	-.29 .86 .29	.71 .76 .24	-.39 .60 .15	1.0 .36 <u>.084</u>

Top number in each cell represents  
 Q Coefficient, middle number  $\propto$  Yates,  
 and lower number Fisher Exact Test  
 level of significance.

\* Top number in each cell represents Q Coefficient, middle  
 number Chi square level of significance, and lower number  
 Fisher Exact Test level of significance.

"Better stoves and things in their houses."  
 "Telephones."  
 "Makes traveling easier: cars and roads."

3. Indian pupils in non-integrated classrooms tend towards lower restricted code usage than do those in integrated classrooms.

(A note seems necessary here. With the percentage of native pupils below 11% in most integrated classrooms, the higher use of restricted code by pupils in integrated classrooms may be due to feelings of being shy or "different" from the other pupils in the classroom causing reticence about use of more elaborated code and perhaps higher usage of restricted code.)

Indians in Integrated and Non-Integrated Classrooms with Total Restricted Code indicates a Chi square of 8.94, significant at .011 level with a Gamma of -.45, Appendix XXVI.

4. In integrated classrooms, Indian pupils tend to lower elaborated code usage while non-Indian pupils seem to use higher elaborated code.

Integrated Classes Only: Non-Indians and Indians with Total Elaborated Code Usage reveals a Chi square of 7.96, Yates correction of 6.57, significant at .03 level, with a Q Coefficient of -.65, Appendix XXVII.

5. In integrated classrooms, Indian pupils tend to give more "no answer" response units than do non-Indians.

Integrated Classes Only: Total No Answer response units show a Chi square of 4.63, Yates correction of 3.22, Fisher Exact Test significance of .03 and a Q Coefficient of .66, Appendix XXVII.

6. In integrated classrooms, of those who responded with present verb usage, Indian pupils gave more indication of such usage than did non-Indians. This finding however cannot be considered valid due to the small number of Indian pupils responding (only two). (See Appendix XXVII.)

Table IX findings of the story-stem analysis gave little to consider except for the need to aid Indian pupils in better elaborated code usage. The distance, space, time questions; and future, present, and past verb questions elicited no significant differences between Indian and non-Indian pupils as a whole. The pressure of "performing before a video camera" in answers and of being selected to sit on a

panel before the class cannot be discounted in the sparsity of the findings. Some more casual means of recording everyday conversation might provide better evidence of elaborated and restricted code likenesses and differences. The analysis does seem to indicate that under the pressure of "a performance" Indian pupils fall behind the ability of non-Indians in elaborated code expression. Educators working with native children would be quick to point to the native child's natural shyness, bi-lingual home background, and reticence about being selected to perform due to native mores which endorse self-effacement rather than being seemingly competitively selected to appear before their peers, teacher and a video camera. The fact that the analysis did provide few differences in ethnicity under such handicaps, is interesting in that it may indicate that the Indian pupils studied may not be as disadvantaged as might be expected, rather the educational systems may be equalizing elaborated and restricted code differences for these pupils.

#### Pupils' Written Endings to the Story Stem

Following the second video taping of the children's answers to the story stem, the teachers asked them to write their endings to the story as they heard it. Table X reports the alpha probability analyses of their written story endings showing: simple and complex sentence analysis, number of abstract and concrete nouns analysis, restricted and elaborated code findings, a global code analysis, and total story length with ethnicity, Indians only in integrated and non-integrated classrooms, and ethnicity with regards to integrated classes. The global code analysis was included to further penetrate restricted code usage. It may be defined as concrete statements: names or classes



of things, where "things" are regarded as actual events and objects; and descriptive statements referring to empirical things which are factually grounded rather than prescriptive, emotive, analytical or aphoristic. Descriptive statements as such do express quality, kind or condition but are not restrictive.

The Table X analysis is perhaps the most interesting part of what may be regarded as the second portion of the "video" analysis. All the scales were normed by story length to rule out any bias from this source. The most important finding seems to be that the effects seemingly caused by an ethnic difference (the first row of Table X) are also equally explained by integration of the Indian children (row two), and in fact when integration is controlled for (row three), the so-called "ethnic" effect disappears; that is, the effect of integration is more "powerful" than an Indian background. Note the two exceptions to this: the use of simple sentences and the restricted code; in both instances, it appears to be Indian background and not the effect of integration which seems to cause the difference. (Note the differences for Restricted Code and Simple Sentences with Ethnicity, Indian Pupils and Integrated Classroom findings on Table X.) In general, non-Indian pupils use more message units, and integrated Indian pupils use more than do non-integrated Indian pupils.

The findings, which are significant, reveal for:

Ethnicity -

1. Indian pupils reveal less usage of simple sentences in their written story endings than do non-Indian pupils.

Ethnicity with Number of Simple Sentences reveals a Chi square of 18.48, significant at .00001 level with a Gamma of -.41, Appendix XXVIII.

2. Indian pupils use a lower number of compound and complex sentences in their written story endings than do non-Indian pupils.



Table X

Pupils' Written Endings to the Story Stem:  
Alpha Probability Analyses

	No. of Simple Sentences	No. of Compound-Complex Sentences	No. of Concrete Nouns	No. of Abstract Nouns	Restricted Code	Elaborated Code	Global Code	Total Story Length
Ethnicity	-.41 18.48 <u>.0001</u>	-.45 21.65 <u>.0000</u>	-.32 14.54 <u>.0007</u>	* -.29 .43 N/A	-.47 21.73 <u>.0000</u>	* -.43 .01 N/A	-.46 26.98 <u>.0000</u>	-.44 30.14 <u>.0000</u>
Indian Pupils Only:	.37	-.41	-.64	* -1.0	0.0	* -.79	-.46	-.84
Integrated --	2.76	5.37	16.51	.002	0.0	.004	5.55	32.37
Non-Integrated Classrooms	.25	.06	<u>.0003</u>	<u>.0000</u>	1.0	<u>.0005</u>	.06	<u>.0000</u>
Integrated Classes Only:	-.62	-.18	.16	* .33	-.47	* .09	-.17	.19
Ethnicity	15.98 <u>.0003</u>	1.52 .46	1.43 .48	.45 N/A	8.49 <u>.01</u>	.97 N/A	2.01 .36	3.7 .29

Note: All scales normed by total story length.

Tables are: Gamma

$\chi^2$   
 $\chi^2$  Probability

Except where marked \*, when they are for a 2x2 table:

Yates Corr.  $\chi^2$  Probability  
Fisher's Exact Probability

Ethnicity with Number of Compound and Complex Sentences reveals a Chi square of 21.65, significant at .0000 with a Gamma of  $-.45$ , Appendix XXVIII.

3. Indian pupils use a lower number of concrete nouns in their written story endings than do non-Indian pupils.

Ethnicity with Number of Concrete Nouns shows a Chi square of 14.54, significant at .0007 level with a Gamma of  $-.32$ , Appendix XXVIII-ii.

4. Indian pupils show less usage of restricted code than do non-Indian pupils in their written story endings. Since the stories were written by both groups in restricted code for the most part, this finding like the foregoing simply points to the greater ability of non-Indian pupils to express themselves.

Ethnicity with Restricted Code reveals a Chi square of 21.73, significant at .0000 with a Gamma of  $-.47$ , Appendix XXVIII-i.

5. The lower usage of restricted code by Indian pupils is verified by the global code analysis.

Ethnicity with Global Code shows a Chi square of 26.98, significant at .0000 with a Gamma of  $-.46$ , Appendix XXVIII -ii.

6. Indian pupils write shorter story endings than do non-Indian pupils when story length is considered.

Ethnicity with Total Story Length: Number of Words reveals a Chi square of 30.14, significant at .0000 with a Gamma of  $-.44$ , Appendix XXVIII-ii.

#### Indian Pupils Only in Integrated and Non-Integrated Classrooms -

7. Indian pupils in Integrated classrooms reveal a higher usage of concrete nouns than do Indian pupils in non-Integrated classrooms in their written story endings.

Indian Pupils Only: Integrated - Non-Integrated Classrooms with Number of Concrete Nouns shows a Chi square of 16.51, significant at .0003 with a Gamma of  $-.64$ , Appendix XXIX.

8. Indian pupils in Integrated classrooms show a slightly higher usage of abstract nouns than do Indian pupils in non-Integrated classrooms in their written story endings.

Indian Pupils Only: Integrated - Non-Integrated Classrooms with Number of Abstract Nouns reveals a Chi square of 15.38, Yates correction of 12.26, significant at .002 with a Q Coefficient of  $-1.00$ , Appendix XXIX.

9. Indian pupils in Integrated classrooms show a higher usage of elaborated code than do Indian pupils in non-Integrated classrooms in their written story endings.

Indian Pupils Only: Integrated - Non-Integrated Classrooms with Elaborated Code reveals a Chi square of 13.37, Yates correction of 11.23, significant at .004 with a Q Coefficient of -.79, Appendix XXIX.

10. Indian pupils in Integrated classrooms tend to write longer story endings than do Indian pupils in non-Integrated classrooms.

Indian Pupils Only - Integrated - Non-Integrated Classrooms with Total Story Length: Number of Words shows a Chi square of 32.37, significant at .0000 with a Gamma of -.84, Appendix XXIX.

#### Integrated Classes Only -

11. In integrated classes only, Indian pupils tend to use a lower number of simple sentences than do non-Indian pupils in their written story endings.

Integrated Classes Only: Ethnicity with Number of Simple Sentences reveals a Chi square of 15.98, significant at .0003 with a Gamma of -.62, Appendix XXX.

12. In integrated classes only, Indian pupils tend to less use of restricted code than do non-Indian pupils in their written story endings. Once again, because both groups of pupils tended to use restricted code in their written story endings, for the most part, this merely points to the greater ability of non-Indian pupils to express themselves.

Integrated Classes Only: Ethnicity with Restricted Code reveals a Chi square of 8.49, significant at .01 with a Gamma of -.47, Appendix XXX.

The Table X analysis reinforces the concept of integrated schooling as an equalizer for written verbal ability for Indian children with that of non-Indian children. The findings show that in integrated classrooms, Indian pupils use more concrete nouns, abstract nouns, elaborated code, and write longer story endings than do Indian pupils in non-integrated classrooms. Indian background shows up their usage of simple sentences and restricted code in integrated classes where their usage is lower than that of non-Indians. This may be explained by the tendency of all pupils to use simple sentences and restricted code for the most part; yet native

background may cause some hampering of expression. A need seems indicated for teachers in such classrooms to give special helps to them in better elaborated code, complex and compound sentence construction, and encouragement of longer written expressions.

#### Picture Inferences of Pupils as Answers to Story Stems

The fourth and final portion of the video analysis involved the teachers having the pupils mark an "X" as answer indications to "distance," "time," and "amount of determination" story stem questions. (See Appendix VI.) The pupils marked the picture answers immediately following the story stem video discussion. The questions and their implications involved:

- 1) Distance: How far away is Calgary? (for George)

Implication - A Concrete to Abstract Reasoning Continuum

"Car" Picture ---→ "Over 20 miles" Picture ---→ "?" Picture

Concrete object  
reasoning

Semi-abstract picturiza-  
tion reasoning

Abstract reasoning  
involving  
puzzlement or  
questioning

- 2) Time: How long did it take George to get to the gas station?

Implication - Elaborated to Restricted Code Reasoning Continuum

"Clock" Picture → "George riding in a → "Food" Picture  
vehicle" Picture

Elaborated Code  
"sign" reasoning

More Restricted Code  
or concrete "sign"  
reasoning

Specific Restricted  
Code or concrete  
"sign" reasoning

- 3) Amount of Determination: How much did George want to get to the city?

Implication -- Amount of Determination Continuum

"Taking a nap" Picture	--> "Being driven to city" Picture	--> "Thumbing a ride" Picture
Little or no determination	Enough determination "to go along" with someone in a vehicle (which may not have required the effort of asking for a ride)	Enough determination "to ask for a ride"

The picture inference analyses were made to probe visual-conceptual differences regarding distance, time, and amount of determination of Indian and non-Indian pupils. The "time" inference seemed a logical one to probe due to the Whorfian concept that the Hopi seem to hold a "timeless" outlook on life. Hoijer also found this to exist among the Navaho.<sup>48</sup> The "distance" concept seemed a representative one to explore measurement differential propensities. Carroll and Casagrande used picture analysis to explore color, size, shape or form and number concepts of two groups of Navaho children: 1) Navaho-speaking dominant children and 2) English-speaking dominant children. They found a greater potency of color for the English-speaking dominant children and an increasing perceptual saliency of shape or form, as compared with color with increasing age, with the curve starting lower and remaining lower for English-speaking dominant Navaho children until the age of seven when the curves tended to converge as age increased.<sup>49</sup> "Amount of determination" pictures were included to test the teachers' inferences that the native children seemed to lack aggressiveness and initiative. (See the Introduction of this study.)



Few differences beyond those which might be expected for increasing discrimination with age maturation appeared. Ethnicity with distance inferences revealed slightly more inclination of non-Indian pupils to respond with the "?" or puzzlement answer, which was considered to indicate more abstract reasoning. Indian pupils in integrated classes seemed to agree with this trend. Indian pupils in both Integrated and non-Integrated classes seem to show determination as expressed by the "Thumbing a ride" picture; the "Clock" picture as a time inference; and "Over 20 miles" distance inference.

Table XI provides the alpha probability designations for the picture inferences. The particular significant findings are:

1. Both male and female pupils endorse "Thumbing a ride" as the major indication of George's amount of determination in wanting to get to the city.

Sex with Amount of Determination reveals a Chi square of 6.19, significant at .04 level with a Gamma of .15, Appendix XXXI-i.

2. The older the pupils the more their tendency to endorse the "Clock" picture as a time indication. This was considered to be more indication of elaborated sign reasoning, and therefore would be expected, as abstract reasoning ability increases with maturity.

Age with Time Picture Inferences shows a Chi square of 17.57, significant at .02 level with a Gamma of -.18, Appendix XXXI-ii.

3. The older the pupils the more their amount of determination regarding George's desire to get to the city. Those fifteen and older seemed "not so concerned," yet still tended more to endorse the "Thumbing a ride" picture.

Age with Amount of Determination Inferences reveal a Chi square of 20.98, significant at .007 with a Gamma of .15, Appendix XXXI-ii.

4. Both Indian and non-Indian pupils endorse the "Over 20 miles" distance picture. Non-Indians tend slightly more to endorse the "?" picture, which was considered to indicate slightly more abstract reasoning or a questioning of oneself of the actual mileage involved.



Table XI

Alpha Probability Designations for  
Picture Inferences with Sex, Age,  
Ethnicity, and Indian Pupil Integration

	Distance Inferences	Time Inferences	Amount of Determination Inferences
Sex	-.08	.02	.15
	2.75	.98	6.19
	.25	.61	<u>.04</u>
Age	-.10	-.18	.15
	7.83	17.57	20.98
	.45	<u>.02</u>	<u>.007</u>
Ethnicity	-.11	-.27	-.22
	9.89	4.55	3.63
	<u>.007</u>	.10	.16
Indian Integration	-.48	-.43	.23
	10.21	4.85	6.14
	<u>.006</u>	<u>.08</u>	<u>.04</u>

Upper number in each cell  
refers to Gamma, middle number  
to Chi square equivalence, and  
lower number to level of significance.

Ethnicity with Distance Inferences show a Chi square of 9.89 significant at .007, with a Gamma of  $-.11$ , Appendix XXXII.

5. Both Indian pupils in Integrated and non-Integrated classes tend to endorse the "Over 20 miles" picture as a distance inference, indicating knowledge of semi-abstract picturization reasoning. Indian pupils in Integrated classes tend slightly more to endorse the "?" inference as a second choice.

Indian Integration with Distance Inferences reveals a Chi square of 10.21, significant at .006, with a Gamma of  $-.48$ , Appendix XXXII.

6. Both Indian pupils in Integrated and non-Integrated classes seem to endorse the "Clock" picture as a time inference.

Indian Integration with Time Inferences reveals a Chi square of 4.85, significant at .08, with a Gamma of  $-.43$ , Appendix XXXII.

7. Both Indian pupils in Integrated and non-Integrated classes seem to indicate the "Thumbing a ride" picture as an answer to how much George wanted to get to the city. Indian pupils in non-Integrated classes seemed less inclined to endorse the "Taking a nap" picture; only one of these pupils responded with such endorsement as a third choice.

Indian Integration with Amount of Determination shows a Chi square of 6.14, significant at .04, with a Gamma of  $.23$ , Appendix XXXII.

The picture analyses reveal little or no real differences between Indian and non-Indian pupils regarding distance, time, or amount of determination as examined by these particular picture answers. Neither can any inference be made that Indian pupils in Integrated classes surpass those in non-Integrated classes in these concepts. It may be that the particular picture inferences selected did not meet the children's projective discriminations or that these children were too old to be as discriminatively responsive to "picture" answers as those would be in the early elementary school years. When consideration is given to the written story endings analysis, just preceding this one, it would seem that the latter concept might be likely. The age level of these children may allow for the more advanced projective method of verbal analysis.

### Conclusion to Part III

A summary of the findings of Part III may be gained from a review of the alpha probability table findings and their conclusions.

Table V, which deals with sex, age, ethnicity, and Indian pupils in integrated and non-integrated classrooms with group structure connotations gives evidence that ethnicity and integration of Indian pupils are aspects worth particular attention. The structural quartile analyses point to classroom discrimination disfavoring the Indian child. Types of bias which seem to be apparent in the entire Perceptions Study indicate pupil bias evident in the structural analyses, teacher bias evident in the adjectival survey of the Introduction to the study, and parental bias "pro the Indian way of life" present in Indian parental value views of Part II of the study.

The structural analysis raises the question, once again, of whether integrated classes are superior to non-integrated classes for Indian children. Parts I and II of the entire study support their learning in integrated classrooms to foster better ethnic relationships with non-Indian pupils, provide better perceived social achievement perceptions which may support inter-ethnic relationships throughout life, allow for inter-ethnic exchanges with teachers of both races, and allow for better clarification of value perspectives regarding both races. Part I recommended integrated education but such that might allow for more than 5 - 11% Indian pupil population per class with experiments to discover the optimum percentage integration for better adjustments. With a higher percentage Indian pupil population per class, social structure findings probably would provide less

discriminatory pupil bias trend. The structure discrimination findings seem outweighed by equal opportunity considerations which may allow children of all races to interact, hopefully without bias being engendered by adult models in their lives.

Table VI presents structural quartile position changes made by the children as evidenced by the two testings made: 1) in February and 2) in late May and early June. Some significancies in pupil and teaching behavior areas are apparent; however no significant relationships seem to exist between quartile changes and ethnicity, integrated classrooms, and Indians in integrated and non-integrated classroom situations. The quartile changes also are shown in relation with the indexes used in Part I of the entire study: Morale, Perceived Social Achievement, Teaching Dimensions of Learning Behavior, and the sub-scales of Protestant Ethic, Family Orientation, and Conformity to Classroom. Relatively little significance is shown for these concepts.

Table VII deals with relationships which exist between the first video analysis involving signal interactions with the first group structure findings. The video-taping was made of normal classroom situations. The table reveals that a large amount of signal interaction and structure as analyzed apparently is not related to any significant degree. Interaction initiated to and from Indian peers seems to bear almost no significant relationships except in relation to structure questions involving interaction concepts where individual choices of peers were made; the Fisher Exact Test was significant at .08 level.

The findings indicate that the children as a whole, both Indian and non-Indian, having higher esteem in the external and internal structural systems, do tend to initiate more signal interactions to non-Indian peers than do those with lower esteem in the systems. The larger number of non-Indian children per integrated class may have affected this finding. Children who are higher in structural position tend to initiate low signal action to the teacher and those lower in structural position initiate higher signal action to the teacher. Children in the external systems of the classrooms, who are more stable in their structural positions, tend to receive more action from their teachers than do those who are downward or upward in structural mobility. Those who are upwardly mobile or stable structurally tend to receive less total action from classmates. Those who are downwardly mobile seem to receive slightly more total action from their peers.

With regards to structure questions with specific reference to interaction, those higher in external system structural position tend to initiate and receive higher signal action from their peers, and those who are lower seem to receive lower signal action. Those higher in internal system structure seem to initiate and receive higher signal action in relationships with their teacher. Those who are lower in the internal structure system seem to initiate lower signal action to their teacher.

Table VIII deals with ethnicity, Indians in integrated and non-integrated classrooms and integrated classes only with the first video taping, the signal interaction analysis. Ethnicity appears to be related with action initiated to Indian peers, to non-Indian peers, and socio-emotional behavior. The analysis reveals that Indian pupils tend to

talk to Indian pupils, and non-Indian pupils tend to talk to non-Indian pupils; something which teachers and administrators who deal with these children would be quick to endorse.

Indian pupils in integrated classrooms do tend to initiate and receive less action to Indian peers, but then, there are less of them present to talk with. Indian pupils in integrated classes engage in less positive socio-emotional behavior than do Indians in non-integrated classes. Indian pupils in non-integrated classes tend to more total interaction than do Indians in integrated classes. These findings reinforce the need to consider placement of more Indian pupils in integrated classes so that the native children may have more peers of their own kind with whom they can identify and interact.

Table IX is concerned with the second video analysis in examination of restricted and elaborated code designations with ethnicity, Indians in integrated and non-integrated classes, and integrated classes only. This analysis was based on answers children in panels gave to a story stem. It involved the pupils video-taped during the second video-taping session. Very few relevant significant differences, significant at least at the .05 level were found. In general, the analyses which were significant revealed a higher level of elaborated code for native children in integrated classrooms, although these children fall below the abilities of non-Indian pupils when both groups are considered. The Table IX findings point to the need to further aid Indian pupils to better elaborated code usage. The questions dealing with distance, space, time, and future, present and past verbs elicited no significant differences between Indian and non-Indian pupils as a whole.



Table X, which deals with the children's written attempts to finish the story stem as read by their teachers, reveals that the effects seemingly caused by an ethnic difference are also equally explained by integration of the Indian children. In fact, when integration is controlled for, the so-called "ethnic" effect disappears; that is, the effect of integration is more powerful than an Indian background. This is apparently true except for two exceptions: the use of simple sentences and restricted code; where it appears to be Indian background and not the effect of integration which seems to cause the difference. In general, non-Indian pupils use more message units; and integrated Indian pupils use more than do non-integrated Indian pupils. All scales in this analysis were normed by story length to rule out any bias from this source.

Table X analysis reinforces the concept of integrated schooling as an equalizer for written verbal ability of Indian children with that of non-Indian children. The findings show that in integrated classrooms, Indian pupils use more concrete nouns, abstract nouns, elaborated code, and write longer story endings. Indian background seems apparent not only in their limited use of elaborated code expressions but in their hesitancy to use even simple sentences of restricted code. A need seems indicated for teachers in such classrooms to give special helps in elaborated code usage, particularly with complex and compound sentence construction, and in encouragement of longer written expressions.

Table XI is concerned with alpha probability designations for picture inferences as answers to questions dealing with distance, time, and amount of determination. These inferences were measured with sex,

age, ethnicity, and Indian integration. Few differences beyond those which might be expected for increasing discrimination with age maturation appeared. Ethnicity with distance inferences revealed slightly more inclination of non-Indian pupils to respond with "a puzzlement answer," which was considered to be an indication of more abstract reasoning. Indian pupils in integrated classes seemed to agree with this trend. Indian pupils in both integrated and non-integrated classes seemed to show strong determination, ability for elaborated reasoning regarding time, and what was considered to be semi-abstract distance reasoning. No inference could be made that Indian pupils in integrated classes surpass those in non-integrated classes in the three concepts.

Overall Analyses Studied. Part III findings seem to confirm the findings for integrated education endorsed in Parts I and II of the study; however further comparisons of the findings could be attempted. Perhaps the major consideration which emerges is that although the structural findings reveal discrimination against the Indian child in integrated classroom situations, the better performance of the native child in such situations in elaborated code usage, particularly in written expressions, points to integrated education endorsement.

Part III findings seem to confirm the findings for integrated education of Parts I and II; however further comparisons of the findings could be attempted. Perhaps the major consideration which emerges is that although the structural findings reveal discrimination against the Indian child in integrated classroom situations, the better performance of the native child in such situations in elaborated code inferences, particularly in written expressions, points to integrated education endorsement.

## REFERENCES

## REFERENCES

<sup>1</sup>Louise C. Lyon, Group Structure, Teacher Behavior, and Morale in Elementary Classrooms (doctoral dissertation, Ann Arbor, Mich.: University Microfilms, Inc., 1965).

<sup>2</sup>Louis Wirth in his discussion of the "Problem of Minority Groups" refers to involvement of members in a group being a "social-psychological phenomena". If physical or cultural marks blend into the dominant culture, the minority group person has less problems. (New York: Bobbs-Merrill Reprint, SS 318, 1945.)

Also see Norman L. Friedman, "Cultural Deprivation, A Commentary in the Sociology of Knowledge", Journal of Educational Thought, Vol. I, No. 2, Aug., 1967. (Calgary: The University of Calgary), pp. 88 - 99.

<sup>3</sup>Louise C. Lyon, "Classroom Structure Charts of a University Elementary School", unpublished (Calgary: The University of Calgary, 1969-70).

<sup>4</sup>Lyon, op. cit. See also C. Wayne Gordon, The Social System of the High School. (Glencoe, Ill.: The Free Press of Glencoe, 1957).

<sup>5</sup>Louise C. Lyon, Edward L. Koch, and Raymond Hertzog, Teacher Mobility: An Albertan Study Involving Rural, Small City and Large City Schools. (Calgary: The University of Calgary School of Education, Fall, 1969), pp. 106-131.

A brief "native pupil population per classroom" questionnaire sent to some dozen teachers and administrators of integrated classrooms of the present study revealed from 4% to 20% amounts of native pupils in the classrooms. Teachers reported lack of Indian pupils' ability to identify with the non-Indian teacher and non-Indian peers. Remarks such as the following were made:

"[Indian pupils] are reserved and non-aggressive in their relationship with me as a teacher and administrator."

"[Indian pupils] are hesitant to speak about their own impressions, ideas, opinions and experiences for fear they will strengthen their 'difference'".

"I get sick and tired of being asked to generalize about individuals. 50% of our Indian students are outgoing, friendly participants in schools, sports and extracurricular activities. The other 50% are shy, retiring, and would rather be completely overlooked. You see we have two Indian students in our Junior High School. Now you make the generalizations."

"Because they are alone in each of the classrooms, the Indian students are extremely withdrawn. A response is never voluntarily given; assignments are rarely done or completed. It is almost as though they ask forgiveness for being Indian...."

<sup>6</sup>David K. Berlo, The Process of Communication (New York: Holt, Rinehart and Winston, 1960), pp. 106-131.

<sup>7</sup>Ibid., pp. 106-131.

<sup>8</sup>George C. Homans, The Human Group (New York: Harcourt, Brace and Company, 1950).

<sup>9</sup>Ibid., p. 43.

<sup>10</sup>Ibid., p. 112.

<sup>11</sup>Ibid., p. 120.

<sup>12</sup>Ibid., p. 119.

<sup>13</sup>Ibid., p. 102.

<sup>14</sup>Ibid., p. 145.

<sup>15</sup>Ibid., p. 112.

<sup>16</sup>Ibid., p. 141.

<sup>17</sup>Ibid., p. 153.

<sup>18</sup>Lyon, Group Structure, Teacher Behavior, and Morale in Elementary Classrooms, op. cit. (See Chapters I - IV.)

<sup>19</sup>A. Bavelas, "A Mathematical Model for Group Structures", Applied Anthropology, 1948, VII, No. 3, pp. 16-30. Also in D. Cartwright and A. Zander (Eds.) Group Dynamics, Research and Theory, 2nd Edition (New York: Row, Peterson and Company, 1960), pp. 670-671.

<sup>20</sup>J. L. Moreno and Helen Jennings, "Statistics of Social Configurations", Part I, Chapter 5 of J. L. Moreno et. al. (Eds.) The Sociometry Reader (Glencoe, Ill.: The Free Press of Glencoe, 1960), p. 37.

<sup>21</sup>R. Duncan Luce, "Connectivity and Generalized Cliques in Sociometric Group Structure", Psychometrika, Vol. XV, No. 2, June, 1950.

<sup>22</sup>Helen H. Jennings, "Leadership and Sociometric Choice", in Newcomb and Hartley (Eds.) Readings in Social Psychology (New York: Holt, 1943).

<sup>23</sup>Frank Harary, "Status and Contrastatus" in Sociometry, a Journal of Research in Social Psychology, American Sociological Association, Vol. XXII, 1959.

<sup>24</sup>Harold J. Leavitt, "Some Effects of Certain Communication Patterns on Group Performance" (doctoral dissertation, Massachusetts Institute of Technology, 1949). In D. Cartwright and A. Zander, Group Dynamics, Research and Theory, 2nd Edition. (New York: Row, Peterson and Company, 1960), pp. 676-679.

<sup>25</sup>Norman E. Gronlund, Sociometry in the Classroom (New York: Harper and Brothers, 1959), p. 80.

<sup>26</sup>Ian C. Ross and Frank Harary, "Identification of the Liaison Persons of an Organization Using the Structure Matrix". Paper supported by a grant from the Rockefeller Foundation to the Research Centre for Group Dynamics, University of Michigan, Ann Arbor, Michigan.

<sup>27</sup>Goodenough in studying inter-relations of nursery school children found that leadership behavior correlated highly with physical activity, talkativeness, laughter, and social participation. See Florence R. Goodenough, "Interrelationships in the Behavior of Young Children", Child Development, 1930, I, pp. 29-48.

<sup>28</sup>Stogdill surveyed factors of leadership associated with samples of literature and classified leadership as being: (1) Capacity - appearance, fluency of speech, intelligence, soundness of judgment, thought, insight, and originality; (2) Achievement - better students, specialized knowledge and ability to get things done; (3) Responsibility - dependability, integrity, strength of convictions, and self confidence; (4) Participation - adaptability, social and physical activity and mobility, sociability, cooperativeness, and ability to enlist cooperation; (5) Status - popularity. See R.M. Stogdill, "Personal Factors Associated with Leadership: A Survey of Literature," Journal of Psychology, 1948, XXV, pp. 35-71.

<sup>29</sup>See Louise C. Lyon, Group Structure, Teacher Behavior and Morale in Elementary Classrooms, op. cit.

<sup>30</sup>See Jurgen Ruesch on verbal and nonverbal codification "Nonverbal Language and Therapy" in Alfred G. Smith (Ed.) Communication and Culture (New York: Holt, Rinehart and Winston, 1966), p. 211-212.

<sup>31</sup>The form used to evaluate the "signal" portion of the Interaction Analysis is a somewhat similar one to "pupil initiated talk" in Amidon and Hunter's VICS categories. (See Edmund Amidon and Elizabeth Hunter, Improving Teaching: The Analysis of Classroom Verbal Interaction (New York: Holt, Rinehart and Winston, Inc., 1966, p. 211.) The form was varied to meet "signal" connotations only and placed in focus upon the pupil, who initiates and receives signals from and sends signals to the teacher and peers.



<sup>32</sup>Magda B. Arnold gives further implications of "the story" for clinical evaluation use in her book Story Sequence Analysis (New York: Columbia University Press, 1962).

The story stem used in the present research was planned and written by the researcher with the help of Dr. B.H. Smeaton, Head of the Linguistics Programme, and Dr. A.G. Storey, Department of Educational Psychology, The University of Calgary.

<sup>33</sup>Peter Farb, "How Do I Know You Mean What You Mean?", Horizon, December, 1968.

<sup>34</sup>John B. Carroll and Joseph B. Casagrande, "The Functions of Language Classifications in Behavior" in Alfred G. Smith (Ed.) op. cit., pp. 489-504, used pictographic non-linguistic means to assess under what conditions the linguistic relativity hypothesis may be accepted. The linguistic relativity hypothesis was initiated in this century by Benjamin Lee Wharf and states that "each language creates a special plight to which an individual must adjust." Its converse would be "that the behavior of a person is not a function of the language he speaks but a way of categorizing experience independently from language."

Carroll and Casagrande found the pictograph to be a "promising technique" for studying the linguistic relativity hypothesis.

<sup>35</sup>Lyon, op. cit. Group Structure, Teacher Behavior, and Morale in Elementary Classrooms.

<sup>36</sup>This was an unusual case and not indicative of other Indian non-integrated classrooms.

<sup>37</sup>Coleman emphasized the importance for girls of "being beautiful" and "a member of the leading crowd" while with boys esteem comes from one's being an "athletic-scholar". "Being a member of a leading crowd" requires perfection of the social interaction skills over and beyond that of achievement in scholarship. Athletic prowess does not even demand the same kind of ability; rather than skill at gaining "affective esteem", sports demand athletic and teamwork competences. It is "how well one plays the game" in sports, and "how well one impresses an affectivity-seeking audience" in social intercourse. See James S. Coleman, The Adolescent Society (New York: The Free Press of Glencoe, 1962). See also C. Wayne Gordon, The Social System of the High School. (Glencoe, Ill.: The Free Press of Glencoe, 1957). Also see David Gottlich and Charles E. Ramsay, The American Adolescent (Homewood, Ill.: The Dorsey Press, 1964).

<sup>38</sup>Cole J. Brembeck, Social Foundations of Education: A Cross Cultural Approach (New York: John Wiley and Sons, 1966), Chapters 7,8,9.

<sup>39</sup>See Homans, op. cit.

<sup>40</sup>See the Coleman-Campbell report. James S. Coleman and Ernest Q. Campbell et. al., Equality of Educational Opportunity (Washington, D.C.: U.S. Government Printing Office, 1966, Vol. 737).

<sup>41</sup>See Ernest Cole's House of Bondage (New York: Random House, 1967), pp. 96-109.

<sup>42</sup>H.H. Remmers, "Rating Methods in Research on Teaching", Ch. 7 of N.L. Gage (Ed.) Handbook of Research in Teaching (Chicago, Ill.: Rand McNally and Company, 1963), p. 348.

<sup>43</sup>These are internal system structural indices because they are based upon mutual choice designations. By criteria previously established for the study, individual choices designate esteem in the external system of the classroom and mutual choices delineate internal system integration.

<sup>44</sup>Jurgen Ruesch, "Nonverbal Language and Therapy" in A.G. Smith, Communication and Culture (New York: Holt, Rinehart and Winston, 1966), p. 212.

<sup>45</sup>Ibid.

<sup>46</sup>Ray L. Birdwhistell, "Some Relations between American Kinesics and Spoken American English" in Ibid., p. 185.

<sup>47</sup>For further understanding of use of story stem or story sequence analysis, refer to Magda B. Arnold, Story Sequence Analysis. (New York: Columbia University Press, 1962).

<sup>48</sup>Joshua A. Fishman, "A Systemization of the Whorfian Hypothesis" in Alfred G. Smith, Communication and Culture (New York: Holt, Rinehart and Winston, 1966), pp. 505-516.

<sup>49</sup>John B. Carroll and Joseph B. Casagrande, "The Function of Language Classifications in Behavior" in Alfred G. Smith, Ibid., pp. 489-504.

APPENDIXES

FOR  
PART III

## APPENDIX I

## SOCIAL STRUCTURE QUESTIONNAIRE

Child's Code No. \_\_\_\_\_ Age \_\_\_\_\_ Teacher's Code No. \_\_\_\_\_

DIRECTIONS: In answer to the questions below, fill in your first and second choices with names of your classmates.

Do not repeat a name for any one question.

If two of your classmates have the same first name, indicate the initial of their last name; for example: "John W." and "John C."

Do not name yourself.

1. Who is the best student in your class?

1. \_\_\_\_\_ 2. \_\_\_\_\_

2. Who talks to you to get help in school work?

1. \_\_\_\_\_ 2. \_\_\_\_\_

3. Among your classmates who do you ask for help in your studies?

1. \_\_\_\_\_ 2. \_\_\_\_\_

4. Who do you think is the best in games on the playground?

1. \_\_\_\_\_ 2. \_\_\_\_\_

5. Who would you like to have on your team in hockey or volley ball?

1. \_\_\_\_\_ 2. \_\_\_\_\_

6. Who works the hardest to win a game on the playground?

1. \_\_\_\_\_ 2. \_\_\_\_\_

7. To whom do you like to talk?

1. \_\_\_\_\_ 2. \_\_\_\_\_

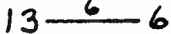
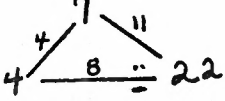
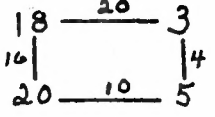
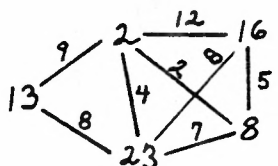
8. Who likes to talk to you?

1. \_\_\_\_\_ 2. \_\_\_\_\_

9. Who do you like the most among your classmates?  
1. \_\_\_\_\_ 2. \_\_\_\_\_
10. Who speaks and understands the most English in your class?  
1. \_\_\_\_\_ 2. \_\_\_\_\_
11. Who is the most fun to work with when you study English?  
1. \_\_\_\_\_ 2. \_\_\_\_\_
12. Who works the hardest to understand English?  
1. \_\_\_\_\_ 2. \_\_\_\_\_
13. Who tries to help others out of school?  
1. \_\_\_\_\_ 2. \_\_\_\_\_
14. Who thinks you try to help others out of school?  
1. \_\_\_\_\_ 2. \_\_\_\_\_
15. Who tries to be friendly with and work together both in school and out of school?  
1. \_\_\_\_\_ 2. \_\_\_\_\_

Definitions of and Rules for "Lyon-Kie"  
Sociometric Graphic Analyses

## CLIQUE AND CLUSTER STRUCTURE

Type of Choices	Delineation
Pair 	<sup>1</sup> Two people choosing each other are not a clique. Such serve simply as links of power in the group.
Triad 	Three people choosing each other may form a nucleus of a clique; but are not sufficient in number to form a clique.
Quadrangle 	Four people choosing each other may form a nucleus of a clique; but are not sufficient in number to form a clique.
Clique 	<p>Five or more members of a group choosing each other in a "circling effort toward exclusiveness" are a separate clique in any area: affective, cognitive, conative, social studies or arithmetic. A minimum requirement for a clique is a triad with two dangles.</p> <p>The circling effort must be present among the five or more. It may take geometric forms: triangular, quadrangular, pentagonal or simply tend to circle; but there must be at least a "triangle of connected power" (a triangle of mutual choice) or a nucleus is not present. Cliques must have a nucleus.</p> <p>Cross choices may be present operating through the forms, see children 8, 2, 16, and 23.</p>

<sup>1</sup>The small figures between children denote the amount of connection score (mutual choice power between children) e.g. "6" is the connection score between child 13 and 6.



# APPENDIX II - Page 2

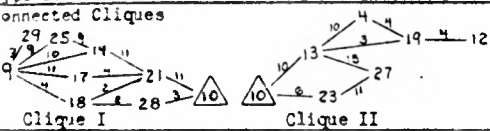

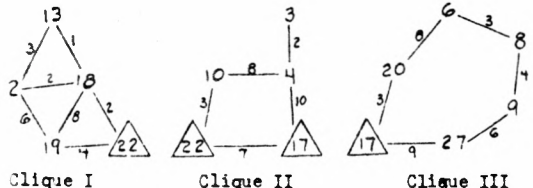
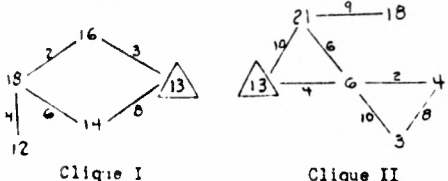
## Definitions of and Rules for "Lyon-Kite" Sociometric Graphic Analyses

Type of Choices	Delineation
<p>Danglers</p>	<p>Danglers, -- individuals attached to only one member of the clique, may be present. Dangler scores are counted in the clique score. Children numbers "4" and "12" are danglers in the example.</p>
<p>Files</p>	<p>A file of members may be attached to a clique. File member scores are counted in the clique score.</p>
<p>Cluster</p>	<p>Less than five members grouping together are a cluster.</p> <p>Pairs, triads, quadrangles that stand alone are clusters.</p>
	<p>Files and indefinite geometric patternings of less than five members are clusters.</p>

APPENDIX II - Page 3

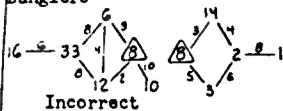
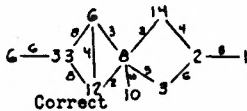
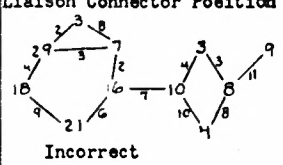
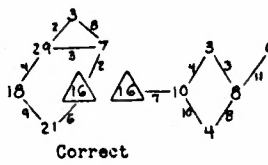
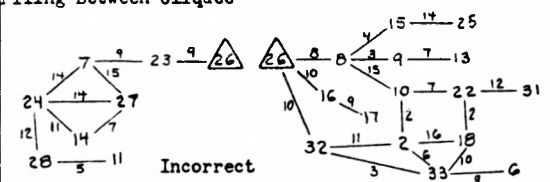
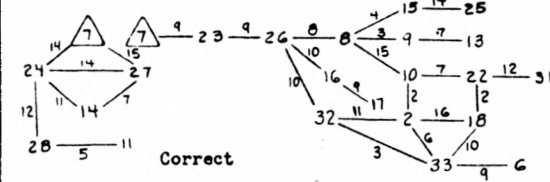
Definitions of and Rules for "Lyon-Kite"  
Sociometric Graphic Analyses

BETWEEN CLIQUE CONNECTION PATTERNS

Type of Choices	Delineation
<p>Connected Cliques</p>  <p>Clique I                      Clique II</p>	<p>Cliques may be connected within one classroom group.</p>
<p>Liaison Connector</p>  <p>All are Clique I</p>	<p>Only "one" individual may tie two cliques in a single area in small group structure. Such an individual is the "liaison connector." His connector strength is to be counted in all cliques with which he ties. In graphic analysis, this individual appears with a triangle about his number, e.g. child number <u>10</u> in the example.</p> <p>If more than one member connects with the second clique, a circling of power between the cliques becomes apparent, creating a closed circuit of power. This coheres all into one clique. Note how children numbers 24 and 23 both tie between the cliques, disallowing a separation: the dotted lines. All are one clique.</p>
<p>Chaining of Cliques</p>  <p>Clique I                      Clique II                      Clique III</p>	<p>A new liaison connector may tie from the first clique or the second clique to a third clique. This chaining of cliques may go on indefinitely within a single area. Children <u>22</u> and <u>17</u> are liaison connectors between "chaining" cliques.</p> <p>A liaison connector has the power interaction ability to tie to "one" and not more than "four" ties (direct ties to another individual) in any one clique. The tie to at least "one" proves his liaison connector position: he may have "one" tie to each of two cliques. The requirement for not more than "four" ties to any one clique guarantees the exclusiveness of the two cliques from each other.</p> <p>Liaison connectors have more strength when they are members of a nucleus of a clique, or of nuclei of two cliques, and when they tie to a higher number of connections, e.g. four connections to a clique are stronger than one. Quantitatively the strength shows up in the repetition of the liaison connector's score in both cliques.</p>
<p>Power Linkage</p>  <p>Clique I                      Clique II</p>	<p>Each tie a liaison connector makes must be backed by power linkage to the individual to whom he ties, that is, the person to whom he ties must in turn tie to at least "one" person. Note how child <u>13</u>, the liaison connector, ties to 16 and 14 in Clique I; these in turn are tied to child 18. It is permissible for child 18, the person to whom the "backer" ties, to have a dangle. In Clique II, child <u>13</u>, the liaison connector, ties to child 6 and 21. Child 21 ties to 18 and 6. Child 6 ties to 3 and 4.</p>

# APPENDIX II - Page 4

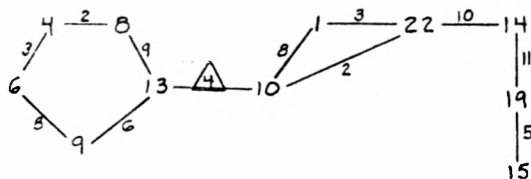
## Definitions of and Rules for "Lyon-Kite" Sociometric Graphic Analyses

Type of Choices	Delineation
<p><b>Danglers</b></p>  <p>Incorrect</p>  <p>Correct</p>	<p>A liaison connector may not have unbacked ties. Unbacked or dangling ties tend to violate or short-circuit the interaction system with their potential for linkage in any direction. Child 10 in the example is a dangler prohibiting two cliques; all must be considered one clique.</p>
<p><b>Liaison Connector Position</b></p>  <p>Incorrect</p>  <p>Correct</p>	<p>Where determination of the liaison connector is difficult to obtain, e.g. where two members vie for liaison connector position with one more closely tied to the larger clique and the other to the smaller clique, the liaison connector is the individual with the strongest tie to the larger clique. He is the stronger foci for interaction power of the smaller clique to reach the larger. In the example child 16 is the liaison connector, not child 10.</p> <p>If a liaison connector cannot be determined, interlacing of structure exists and all must be regarded as one clique.</p>
<p><b>Filing Between Cliques</b></p>  <p>Incorrect</p>  <p>Correct</p>	<p>Filing between relatively isolated cliques is allowed. In this case, the liaison connector is the child with the largest connector strength. He may be attached either to a nucleus of the larger clique or to a nucleus of a smaller clique. Where two children vie for the liaison connector position with both having the same connector strength, a balanced power situation exists.</p> <p>A dangler off any member of a file between cliques has too much potential toward short-circuitry of the separative-nees. If one should be present, all must be regarded as one clique.</p>

# APPENDIX II - Page 5 Definitions of and Rules for "Lyon-Kite" Sociometric Graphic Analyses

## BALANCED POWER CLIQUE STRUCTURE

Type of Choices  
Balanced Power Cliques



### Delineation

A "balanced power" situation may exist. The two cliques will be almost equal in size with memberships varying by a two or fewer member difference. The ascertainment of the liaison connector may be nearly impossible to determine. Two individuals may appear to hold "equal" or balanced strength by meeting all liaison connector rules: each is connected to a separate clique, yet they are linked together.

In this case, the "connection score" between the two individuals, who appear to be liaison connectors, becomes the tying link. This takes the emphasis away from the individual as the connecting link and places it upon the "message" possibility between the two individuals.

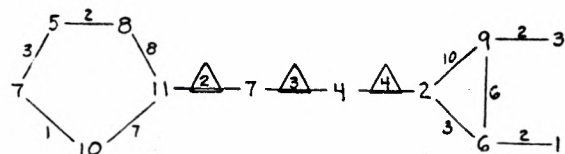
The "connection score", the sum of points the two individuals give to each other, has the triangular marking placed around it (see  $\triangle 4$ ), and is counted in both cliques.

The connector strength belonging to each individual is counted with the clique score to which the individual belongs.

Scores in this instance become redefined as "clique power points."

A dangler attached to either member participating in a "balanced power connection score" nullifies the linkage, and all are considered one clique.

Balanced power clique situations have appeared twice in our analyses of cliques. Due to this infrequency, we have analyzed our data both ways: one shows the clique united for lack of an apparent liaison connector (the usual analysis), and the other shows the "connection link" in the balanced power situation.



In a file-between cliques situation, the liaison connector was selected to be the child with the larger connector strength. If two children were to hold the same connector strength, a balanced power situation would exist where both members would vie for the liaison connector role. Following the balanced power substantive idea, the power of interaction would lie in the connection scores that each of these members give to a file member between them and in the connection scores that any file members between them give to each other. All connection scores would be counted in each of the two cliques. In the example, children 11 and 2 vie for the liaison connector position with each holding a connector strength of seventeen. The balanced power situation requires that the connection scores  $\triangle 2$ ,  $\triangle 3$ ,  $\triangle 4$ , be employed as these scores carry the interaction message. These connection scores would appear in both cliques. No balanced power situation similar to this appeared in the study.

Note: The exploration of data revealed that the balanced power situation could be considered in four ways: (1) the power of the agreement message could be considered (the connection score of our analysis); (2) the child with the most mutual choice point power could be considered as the liaison connector; (3) the sum of the scores of the people connected to each of the liaison connectors who vie for power could be obtained to see the power stacked in those who support the child directly, and the one with the larger "link-stacked" power behind him could be considered as the liaison connector; (4) the sum of the scores of the people in each clique linked to each of the two liaison connectors could be obtained to see the clique power stacked in those who support the child, and the one with the larger "clique-stacked" power behind him could be considered as the liaison connector. We chose the first consideration arbitrarily because these are children of a democratic society who are being taught to solve problems by deference to solutions agreed upon through a democratic voting process.



APPENDIX III  
 FORMAT FOR ANALYSIS OF VIDEO-TAPING SESSION I

Signal  
 Interaction Profile

Child No. \_\_\_\_\_ Circle One: Indian Non-Indian

Class \_\_\_\_\_ Date \_\_\_\_\_

		Talley Marks	No./TM
ACTION	Initiates Action	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
	Passive	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
INDIAN PEERS	Initiates Interaction	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
	Receives Interaction	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
	Responds to Concept	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
NON-INDIAN PEERS	Initiates Interaction	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
	Receives Interaction	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
	Responds to Concept	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
WITH TEACHER	Initiates Interaction	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
	Receives Interaction	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
	Responds to Concept	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
SOCIO-EMOTIONAL	Positive Socio-Emotional Signal	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
	Negative Socio-Emotional Signal	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>
ERROR	Error Factor (Notices camera, action cannot be seen due to camera distortion, blockage, in general rater inability to discern action and inter-action clearly.)	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>	<div style="border: 1px solid black; width: 50px; height: 40px;"></div>

## APPENDIX IV

## THE STORY-STEM

To the Teacher: A prologue such as the following may help to orient pupils.

Nearly everyone likes puzzles, and there are very few people indeed who do not like stories. Today, we are going to listen to a story which has in it some of the things which Indian boys and girls face in life. It is not so much a story as it is a puzzle -- a puzzle about life. While I read it to you, I want you to think about the things which happen. When we are through with it, we will discuss the story and see if we can complete it.

This is a story about George, an Indian boy. He grew up on the reserve like many Indian boys do. George, like other Indian boys, was aware of many things which happened around him. He thought about things which happened. In fact, he did a great deal of thinking about all kinds of things. He wondered why his skin felt warm and happy when the sun touched it early in the morning on a summer day. He thought about the water in the river circling always in one direction around the rocks whether they were large rocks or the small stones near its edge. He thought about the difference between the sound the wind made through the trees in the morning and in the evening. He examined in his thought the difference between the taste of meat cooked over an open fire when he first started eating and at the end of the meal.

George was about the age of the boys in your classroom. He liked games. He like the way the ball curved up in volley-ball. The smack the ball made when it left someone's hands was a sound he liked to



hear. He liked the feeling of his friends playing the game beside him. All these things made George think a great deal.

It was the night of full moon late in November when George joined the group of men who were talking with his father. The talk was about Indians and Ottawa, as it so often was. What the older men said seemed true;--the White men could not understand the Indian ways. The White man's thought was that the Indian could live in the large cities just as the White man lives. Where would the open places be for the Indian to reach with his eyes, his ears and his thoughts if he had to live in a city?

There was strange talk about releasing some of the land on the reserve so that White men could come and live there. If the land were sold, more and more White men would come. George wondered what would happen to the deer if many houses were built on the reserve. He thought about the way the land looked now. There were no houses between his home and the school. The road did not go straight to the school; but went down to the river, around the base of the hill and then came to the school.

What would the Indians do if the White men and their families came? Life on the reserve would change. It might not change at first; but it would change. It would become like the life of White men. George thought about the time he saw the city. His uncle had taken him to see the largest city nearby. There were many houses, many roads, many buildings and many cars. There was too much noise and not enough room. There was not enough room on the sidewalk. George had felt

strange and surrounded by too many people and things.

It was just about the time when George was ready to go home when his Grandfather spoke to him. "You must go to the city and learn all that you can learn in school," he said. "You must live in a boarding house and try to understand the White man. You will need to know how he lives. You can stay with Mr. Jones. He has a room." George had looked at his Grandfather; and because this would take much thought, he had gone out into the night and had found a place to think.

He sat in silence on the rock which was his favorite, and thought about all the talk of the evening. He thought until he grew very sleepy and went inside to go to bed.

The morning after the talk, George awoke with the thought that he would be late again for school. Then he remembered, it was Saturday. There was no school. He was just about to settle down to sleep some more when "the thought" went through his mind. It was the memory of what his Grandfather had said. He knew he must get up and go to the city. He must find Mr. Jones's house. Mr. Jones taught at his school. He knew Mr. Jones; but he must see his house. If he could see the house, he would know something about living in the city.

He got up very quietly and dressed. He found food and ate. After eating, he went outside. The air was cold; but the sun was shining. No one was awake.

George began walking down the road that led from the school to the highway. He hoped there were some cars on the highway. There were none moving along the road where he walked. A gopher ran to the

side of the road and stood on his hind legs. A flock of partridge flew up from the edge of the field beside him and he missed a step. Farther along, he threw a couple of rocks at a wrecked car in the ditch. Finally, he reached the highway and turned in the direction of the city. A car came down the road and passed him. He walked on.

He had walked for a long time when someone stopped for him. He ran to get to the car. Inside the car, it was warm and the man asked many questions. George told him that he had to get to the city--to his teacher's house. The car moved along the highway. George heard the man talking and talking. He closed his eyes, put his head back against the seat, and pretended to be asleep.

Perhaps because the car was so warm, he did sleep. Then he dreamed. He was on a pony, not an ordinary pony; but a brown and white pony with strong legs and a proud head. The pony moved with sure feet and ran smoothly along the path out to the prairie grass. He and the horse were one. They began to race across the prairie because he had to get somewhere. Ahead he saw black smoke. It was a prairie fire! He felt fear. Then he realized it was not in the direction he was going. He was racing the pony to try to get to the White man's fort. There was something he must do there. Now he remembered. He was going to tell the Agent that his people would be moving their tents. They were going to the place where the buffalo were many.

When George awoke, the car had stopped. They were at a filling station. The White man was not going on. He lived at the filling station. George got out of the car and started walking along the high-

way again. The city was far away. He walked on and on until he knew he was far from the filling station. He was hungry. He began to think. How far was the city? What would he say to Mr. Jones? What would it be like to live in a boarding home in the city?

-----

### After Reading the Story-Stem

#### To the Teacher:

1. Please select the eight children who were video-taped at our first session of video-taping to come up to a semi-circle at the front of the classroom. Tell the class that this group of pupils will act as a panel to help finish the story and answer some questions about it.
2. Lead the panel and the class in a discussion of the story. This portion of the lesson will be video-taped.

Try to involve the pupils in the panel in answering first and then try to get answers from the rest of the pupils in the class. Use the following questions to help get responses about time; distance; the past, present or future; and how much your pupils feel about George's behavior.

Try to cover the questions in the 20 minutes of video-taping time.

3. When you have finished your story discussion, have the pupils go to their seats. We shall need their attempts to finish the story in written form.

Please take the time you may need to get written responses from your pupils.

Thank you!

Teacher: In these questions, we are trying to perceive how the children express time; distance; and, present, past, future. Try not to make suggestions such as "hours", or "miles", but try to get responses from the children.

### QUESTIONS TO GET ORAL RESPONSES

#### (Preliminary Content Questions)

1. WHAT DOES A GOOD PONY LOOK LIKE?
  - 1a. What kind of pony did George have a dream about?
  - 1b. What would you want your pony to be like?
2. WHERE DO INDIAN PEOPLE STOP USING INDIAN KNOWLEDGE AND START USING THE WHITE MAN'S KNOWLEDGE?
  - 2a. When did George use Indian Knowledge?
  - 2b. When would he use the white man's knowledge?
  - 2c. How have the cooperatives helped Indian people?
  - 2d. How has modern machinery helped Indian people?

#### (Distance)

3. HOW FAR DO YOU THINK THE CITY WAS FROM THE RESERVE?
  - 3a. How far do you think George could have walked if he hadn't gotten a ride?
  - 3b. How do you think George felt about trying to go all the way from the reserve to the city?

#### (Time)

4. HOW LONG DO YOU THINK GEORGE KEPT WALKING ALONG THE HIGHWAY TO THE CITY?
  - 4a. How long do you think George could have kept going if he was really tired?
  - 4b. How do you think George felt about the amount of time it might take him to get to the city?



(Content)

5. WHY DO YOU THINK GEORGE WAS SO CONCERNED ABOUT SEEING MR. JONES'S HOUSE?

5a. How would you feel about going to school in the city?

5b. How would you feel about living in a boarding home?

(Future)

6. WHAT DO YOU THINK GEORGE WOULD DO WHEN HE GOT TO THE CITY?

6a. How would George act if Mr. Jones saw him?

6b. What would George do if Mr. Jones was not at home?

(Past)

7. WHEN GEORGE FELL ASLEEP IN THE CAR AND DREAMED, HOW DID HE FEEL ABOUT GOING TO SEE THE AGENT?

7a. What kind of person do you think the Agent was?

7b. Was this how Indian Agents used to be?

(Present)

8. WHEN THE STORY ENDS, GEORGE WAS STILL WALKING ALONG THE HIGHWAY. WHAT DO YOU THINK HE DID NEXT?

8a. What would you do if you were tired and had been walking for a long time?

8b. How would you feel about being out on a highway all alone?

APPENDIX V-1  
 FORMAT FOR ANALYSIS OF VIDEO-TAPING SESSION II

Sign  
 Interaction Profile

Teacher No. _____	Child No.					Sub-Total					Sub-Total	Total
Grade _____	I/NI											
Scored by _____	M/F											
	Age											
Total Restricted Code												
Total Elaborated Code												
No Answer												
Total No. Message Units												
Comments												

## FORMAT FOR ANALYSIS OF VIDEO-TAPING SESSION II

Sign  
Interaction Profile

Teacher No.	Child No.					Sub-Total					Sub-Total	Total
_____	I/NI											
Grade _____	M/F											
Scored by _____	Age											
Distance/ Space	Restricted											
	Elaborated											
	N/A											
Time	Restricted											
	Elaborated											
	N/A											
Content	Restricted											
	Elaborated											
	N/A											
Future	Restricted											
	Elaborated											
	N/A											
Past	Restricted											
	Elaborated											
	N/A											
Present	Restricted											
	Elaborated											
	N/A											
Total												
Comments												

APPENDIX VI

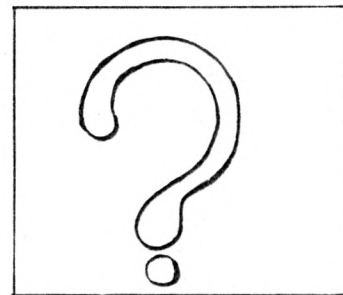
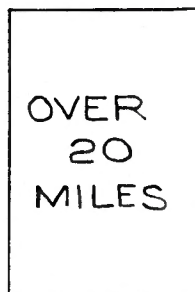
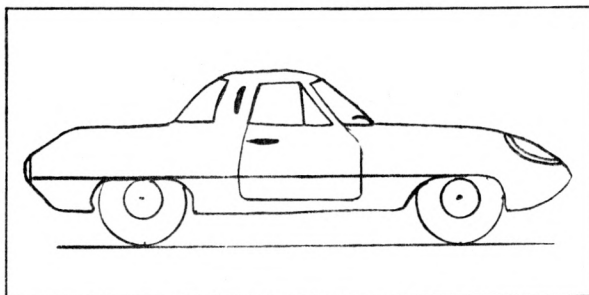
Child's Number \_\_\_\_\_

Teacher Number \_\_\_\_\_

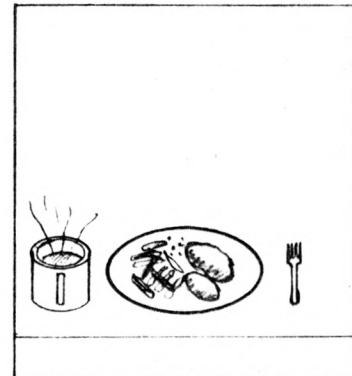
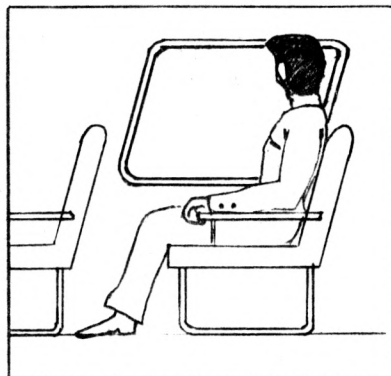
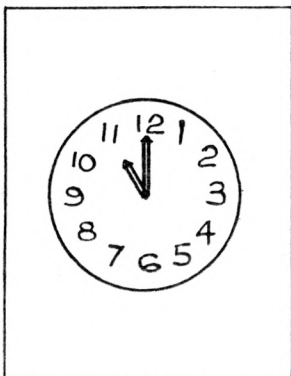
STORY ANSWERS

Put an "X" over the right answer; the answer that makes sense to you.

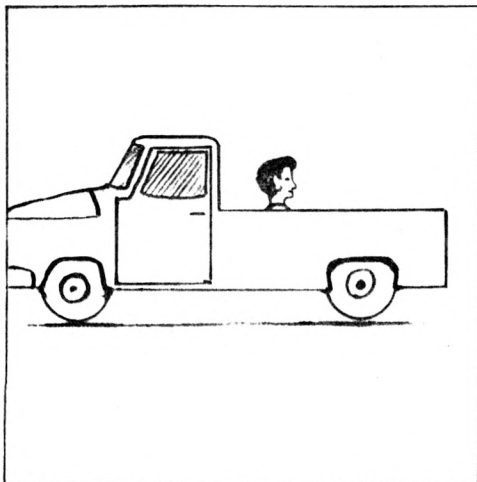
1. How far away is Calgary?



2. How long did it take George to get to the gas station?



3. How much did George want to get to the city?



# APPENDIX VII

Sex with Interaction Question Mutual Choice Strengths  
and Structural Positioning on Lyon-Kite Graphics  
Chi-Square Significant at Least @ .02 Level

## Sex with First Testing Interaction Question Mutual Choice Score Strengths

	0 - 9 Strength	10 - 14 Strength	15 - 19 Strengths	20 - 45+ Strength
Male	35.6 <u>104</u> / 60.5	15.8 <u>46</u> / 42.6	19.2 <u>56</u> / 50.9	29.5 <u>86</u> / 48.3
Female	24.6 <u>68</u> / 39.5	22.5 <u>62</u> / 57.4	19.6 <u>54</u> / 49.1	33.3 <u>92</u> / 51.7

$\chi^2 = 9.70$   
Sig. @ .02  
Gamma = .12

## Sex with Second Testing Structural Positioning on Lyon-Kite Graphics

	Isolate	Pair	Dangler	File Member	Triad Member	Quadrangle Member	Clique Member
Male	18.6 <u>48</u> / 63.2	3.1 <u>8</u> / 61.5	20.2 <u>52</u> / 55.9	19.0 <u>49</u> / 57.0	7.8 <u>20</u> / 33.3	15.1 <u>39</u> / 50.0	16.3 <u>42</u> / 42.9
Female	11.4 <u>28</u> / 36.8	2.0 <u>5</u> / 38.5	16.7 <u>41</u> / 44.1	15.0 <u>37</u> / 43.0	16.3 <u>40</u> / 66.7	15.9 <u>39</u> / 50.0	22.8 <u>56</u> / 57.1

$\chi^2 = 17.32$   
Sig. @ .008  
C = .18

# APPENDIX VIII-1

Age with Quartile Positions, Interaction  
Question Mutual Choice Strengths  
Chi-Square Significant at Least @ .05 Level

## Age with First Testing Interaction Individual Choice Quartile Positions

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
11 years or younger	<u>27</u> / 36.5	<u>14</u> / 18.9	<u>20</u> / 27.0	<u>13</u> / 17.6
12 years	<u>66</u> / 34.4	<u>56</u> / 29.2	<u>35</u> / 18.2	<u>35</u> / 18.2
13 years	<u>46</u> / 29.1	<u>47</u> / 29.7	<u>35</u> / 22.2	<u>30</u> / 19.0
14 years	<u>34</u> / 25.0	<u>39</u> / 28.7	<u>33</u> / 24.3	<u>30</u> / 22.1
15 years or older	<u>8</u> / 13.1	<u>12</u> / 19.7	<u>23</u> / 37.7	<u>18</u> / 29.5

$\chi^2 = 24.88$   
Sig. @ .01  
Gamma = .15

## Age with First Testing Interaction Question Mutual Choice Score Strengths

	0 - 9 Strength	10 - 14 Strength	15 - 19 Strength	20 - 45+ Strength
11 years or younger	<u>20</u> / 27.4	<u>14</u> / 19.2	<u>13</u> / 17.8	<u>26</u> / 35.6
12 years	<u>44</u> / 25.9	<u>26</u> / 15.3	<u>41</u> / 24.1	<u>59</u> / 34.7
13 years	<u>40</u> / 27.0	<u>24</u> / 16.2	<u>26</u> / 17.6	<u>58</u> / 39.2
14 years	<u>50</u> / 37.3	<u>26</u> / 19.4	<u>29</u> / 21.6	<u>29</u> / 21.6
15 years or older	<u>27</u> / 45.0	<u>16</u> / 26.7	<u>6</u> / 10.0	<u>11</u> / 18.3

$\chi^2 = 28.17$   
Sig. @ .005  
Gamma = -.16



# APPENDIX VIII -ii

Age with First Testing Structural Positioning on Lyon-Kite Graphics  
Chi-Square is Significant @ .0000

	Isolate		Pair		Dangler		File Member		Triad Member		Quadrangle Member		Clique Member	
11 years or younger	<u>4</u>	5.6	<u>1</u>	1.4	<u>10</u>	14.1	<u>8</u>	11.3	<u>1</u>	1.4	<u>6</u>	8.5	<u>41</u>	57.7
12 years	<u>13</u>	6.9	<u>6</u>	3.2	<u>26</u>	13.8	<u>41</u>	21.7	<u>14</u>	7.4	<u>26</u>	13.8	<u>63</u>	33.3
13 years	<u>10</u>	6.4	<u>7</u>	4.5	<u>19</u>	12.2	<u>20</u>	12.8	<u>15</u>	9.6	<u>11</u>	7.1	<u>74</u>	47.4
14 years	<u>22</u>	16.4	<u>10</u>	7.5	<u>16</u>	11.9	<u>29</u>	21.6	<u>10</u>	7.5	<u>6</u>	4.5	<u>41</u>	30.6
15 years or older	<u>11</u>	18.3	<u>8</u>	13.3	<u>10</u>	16.7	<u>10</u>	16.7	<u>4</u>	6.7	<u>6</u>	10.0	<u>11</u>	18.3
$\chi^2 = 68.49$ Sig. @ .0000 C = .31														

APPENDIX IX-1, Page 1

Age with Second Testing Quartile Positions

Chi-Square Significant @ .004-.04 Levels

Age with Second Testing Total Individual Choice Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
11 years or younger	<u>19</u> / 31.1	<u>11</u> / 18.0	<u>20</u> / 32.8	<u>11</u> / 18.0
12 years	<u>51</u> / 32.7	<u>41</u> / 26.3	<u>31</u> / 19.9	<u>33</u> / 21.2
13 years	<u>51</u> / 34.7	<u>33</u> / 22.4	<u>38</u> / 25.9	<u>25</u> / 17.0
14 years	<u>35</u> / 25.7	<u>47</u> / 34.6	<u>26</u> / 19.1	<u>28</u> / 20.6
15 years or older	<u>9</u> / 15.3	<u>13</u> / 22.0	<u>20</u> / 33.9	<u>17</u> / 28.8

$$x^2 = 23.13$$

Sig. @ .02

Gamma = .07

Age with Second Testing Total Mutual Choice Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
11 years or younger	<u>18</u> / 29.5	<u>13</u> / 21.3	<u>18</u> / 29.5	<u>12</u> / 19.7
12 years	<u>51</u> / 33.6	<u>41</u> / 27.0	<u>29</u> / 19.1	<u>31</u> / 20.4
13 years	<u>47</u> / 32.9	<u>34</u> / 23.8	<u>37</u> / 25.9	<u>25</u> / 17.5
14 years	<u>37</u> / 28.2	<u>40</u> / 30.5	<u>36</u> / 27.5	<u>18</u> / 13.7
15 years or older	<u>8</u> / 13.8	<u>14</u> / 24.1	<u>13</u> / 22.4	<u>23</u> / 39.7

$$x^2 = 25.64$$

Sig. @ .01

Gamma = .08

APPENDIX IX-1, Page 2

Age with Second Testing Quartile Positions  
Chi-Square Significant @ .004-.04 Levels

Age with Second Testing Interaction Individual Choice Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
11 years or younger	<u>19</u> / 31.1	<u>14</u> / 23.0	<u>17</u> / 27.9	<u>11</u> / 18.0
12 years	<u>54</u> / 34.6	<u>35</u> / 22.4	<u>38</u> / 24.4	<u>29</u> / 18.6
13 years	<u>47</u> / 32.0	<u>36</u> / 24.5	<u>34</u> / 23.1	<u>30</u> / 20.4
14 years	<u>38</u> / 28.1	<u>44</u> / 32.6	<u>29</u> / 21.5	<u>24</u> / 17.8
15 years or older	<u>7</u> / 11.9	<u>15</u> / 25.4	<u>15</u> / 25.4	<u>22</u> / 37.3

$$x^2 = 21.17$$

Sig. @ .04

Gamma = .09

Age with Second Testing Interaction Mutual Choice Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
11 years or younger	<u>18</u> / 29.5	<u>16</u> / 26.2	<u>16</u> / 26.2	<u>11</u> / 18.0
12 years	<u>53</u> / 34.9	<u>39</u> / 25.7	<u>35</u> / 23.0	<u>25</u> / 16.4
13 years	<u>43</u> / 30.1	<u>32</u> / 22.4	<u>39</u> / 27.3	<u>29</u> / 20.3
14 years	<u>41</u> / 31.3	<u>39</u> / 29.8	<u>29</u> / 22.1	<u>22</u> / 16.8
15 years or older	<u>6</u> / 10.3	<u>12</u> / 20.7	<u>15</u> / 25.9	<u>25</u> / 43.1

$$x^2 = 28.56$$

Sig. @ .004

Gamma = .12

APPENDIX IX-ii

Age with Second Testing Structural Positioning on Lyon-Kite Graphics  
Chi-Square is Significant at .0001

	Isolate	Pair	Dangler	File Member	Triad Member	Quadrangle Member	Clique Member
11 years or younger	<u>4</u> / 7.0	<u>0</u> / 0.0	<u>8</u> / 14.0	<u>6</u> / 10.5	<u>5</u> / 8.8	<u>13</u> / 22.8	<u>21</u> / 36.8
12 years	<u>21</u> / 14.1	<u>2</u> / 1.3	<u>32</u> / 21.5	<u>26</u> / 17.4	<u>28</u> / 18.8	<u>10</u> / 6.7	<u>30</u> / 20.1
13 years	<u>22</u> / 15.7	<u>3</u> / 2.1	<u>22</u> / 15.7	<u>23</u> / 16.4	<u>15</u> / 10.7	<u>27</u> / 19.3	<u>28</u> / 20.0
14 years	<u>17</u> / 13.3	<u>8</u> / 6.3	<u>26</u> / 20.3	<u>26</u> / 20.3	<u>10</u> / 7.8	<u>22</u> / 17.2	<u>19</u> / 14.8
15 years or older	<u>13</u> / 27.7	<u>1</u> / 2.1	<u>12</u> / 25.5	<u>8</u> / 17.0	<u>4</u> / 8.5	<u>7</u> / 14.9	<u>2</u> / 4.3
$\chi^2 = 58.17$ Sig. @ .0001 C = .31							

APPENDIX IX-iii

Age with Second Testing Interaction Question  
Mutual Choice Score Strengths

	0 - 9 Strength	10 - 14 Strength	15 - 19 Strength	20 - 45+ Strength
11 years or younger	<u>12</u> / 21.1	<u>9</u> / 15.8	<u>11</u> / 19.3	<u>25</u> / 43.9
12 years	<u>50</u> / 33.6	<u>16</u> / 10.7	<u>26</u> / 17.4	<u>57</u> / 38.3
13 years	<u>43</u> / 31.2	<u>31</u> / 22.5	<u>20</u> / 14.5	<u>44</u> / 31.9
14 years	<u>50</u> / 39.1	<u>24</u> / 18.8	<u>18</u> / 14.1	<u>36</u> / 28.1
15 years or older	<u>22</u> / 47.8	<u>9</u> / 19.6	<u>6</u> / 13.0	<u>9</u> / 19.6
$\chi^2 = 20.99$ Sig. @ .05 Gamma = -.17				

APPENDIX X-1, Page 1

Ethnicity with First Testing Quartile Positions  
Chi-Square Significant @ .0004-.01 Levels

Ethnicity with First Testing Total Individual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Non-Indian	<u>159</u> / 30.7	<u>138</u> / 26.6	<u>132</u> / 25.5	<u>89</u> / 17.2
Indian	<u>25</u> / 19.8	<u>27</u> / 21.4	<u>34</u> / 27.0	<u>40</u> / 31.7

$X^2 = 16.07$   
Sig. @ .001  
Gamma = .27

Ethnicity with First Testing Interaction Individual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Non-Indian	<u>161</u> / 31.1	<u>144</u> / 27.8	<u>123</u> / 23.7	<u>90</u> / 17.4
Indian	<u>24</u> / 19.0	<u>28</u> / 22.2	<u>33</u> / 26.2	<u>41</u> / 32.5

$X^2 = 17.99$   
Sig. @ .0004  
Gamma = .29



APPENDIX X-1, PAGE 2

Ethnicity with First Testing Quartile Positions  
Chi-Square Significant @.0004-.01 Levels

Ethnicity with First Testing Total Mutual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Non-Indian	<u>163</u> / 31.5	<u>145</u> / 28.0	<u>126</u> / 24.3	<u>84</u> / 16.2
Indian	<u>25</u> / 19.8	<u>30</u> / 23.8	<u>37</u> / 29.4	<u>34</u> / 27.0

$\chi^2 = 12.77$   
Sig. @ .005  
Gamma = .25

Ethnicity with First Testing Interaction Mutual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Non-Indian	<u>163</u> / 31.5	<u>144</u> / 27.8	<u>125</u> / 24.1	<u>86</u> / 16.6
Indian	<u>25</u> / 19.8	<u>32</u> / 25.4	<u>37</u> / 29.4	<u>32</u> / 25.4

$\chi^2 = 10.28$   
Sig. @ .01  
Gamma = .23

# APPENDIX X-ii

Ethnicity with First Testing Membership in a Structural Position on Lyon-Kite  
Graphics and Interaction Question Mutual Choice Score Strengths  
Chi-Square Significant @ .003-.12 Levels

Ethnicity with First Testing Membership in a Structural Position on Lyon-Kite Graphics														
	Isolate		Pair		Dangler		File Member		Triad Member		Quadrangle Member		Clique Member	
Non-Indian	<u>44</u>	/ 8.6	<u>27</u>	/ 5.3	<u>64</u>	/ 12.5	<u>93</u>	/ 18.2	<u>41</u>	/ 8.0	<u>45</u>	/ 8.8	<u>197</u>	/ 38.6
Indian	<u>18</u>	/ 14.9	<u>6</u>	/ 5.0	<u>22</u>	/ 18.2	<u>20</u>	/ 16.5	<u>7</u>	/ 5.8	<u>13</u>	/ 10.7	<u>35</u>	/ 28.9
X <sup>2</sup> = 9.90 Sig. @ .12 C = .12														

Ethnicity with First Testing Interaction Question Mutual Choice Score Strengths				
	0 - 9 Strength	10 - 14 Strength	15 - 19 Strength	20 - 45+ Strength
Non-Indian	<u>142</u> / 29.3	<u>83</u> / 17.1	<u>94</u> / 19.4	<u>165</u> / 34.1
Indian	<u>47</u> / 38.5	<u>28</u> / 23.0	<u>26</u> / 21.3	<u>21</u> / 17.2
X <sup>2</sup> =13.64 Sig. @ .003 Gamma = -.25				

APPENDIX XI-1, Page 1

Ethnicity with Second Testing Quartile Positions  
Chi-Square Significant @ .005-.01 Levels

Ethnicity with Second Testing Total Individual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Non-Indian	<u>144</u> / 31.2	<u>125</u> / 27.1	<u>111</u> / 24.0	<u>82</u> / 17.7
Indian	<u>26</u> / 21.5	<u>28</u> / 23.1	<u>28</u> / 23.1	<u>39</u> / 32.2

$X^2 = 13.36$   
Sig. @ .003  
Gamma = .24

Ethnicity with Second Testing Interaction Individual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Non-Indian	<u>148</u> / 32.1	<u>120</u> / 26.0	<u>110</u> / 23.9	<u>83</u> / 18.0
Indian	<u>24</u> / 19.8	<u>31</u> / 25.6	<u>27</u> / 22.3	<u>39</u> / 32.2

$X^2 = 14.24$   
Sig. @ .002  
Gamma = .25

APPENDIX XI-1, Page 2

Ethnicity with Second Testing Quartile Positions  
Chi-Square Significant @ .005-.01 Level

Ethnicity with Second Testing Total Mutual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Non-Indian	<u>147</u> / 31.8	<u>124</u> / 26.8	<u>107</u> / 23.2	<u>84</u> / 18.2
Indian	<u>19</u> / 18.3	<u>25</u> / 24.0	<u>31</u> / 29.8	<u>29</u> / 27.9

$\chi^2 = 11.10$   
Sig. @ .01  
Gamma = .26

Ethnicity with Second Testing Interaction Mutual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Non-Indian	<u>143</u> / 31.0	<u>122</u> / 26.4	<u>113</u> / 24.5	<u>84</u> / 18.2
Indian	<u>22</u> / 21.2	<u>23</u> / 22.1	<u>27</u> / 26.0	<u>32</u> / 30.8

$\chi^2 = 10.04$   
Sig. @ .01  
Gamma = .23

# APPENDIX XI-ii

## Ethnicity with Second Testing Structural Positioning on Lyon-Kite Graphics and Interaction Question Mutual Choice Strengths Chi-Square Significant @ .005

### Ethnicity with Second Testing Structural Positioning on Lyon-Kite Graphics

	Isolate	Pair	Dangler	File Member	Triad Member	Quadrangle Member	Clique Member
Non-Indian	<u>59</u> / 13.3	<u>11</u> / 2.5	<u>84</u> / 19.0	<u>74</u> / 16.7	<u>47</u> / 10.6	<u>69</u> / 15.6	<u>98</u> / 22.2
Indian	<u>22</u> / 21.8	<u>3</u> / 3.0	<u>22</u> / 21.8	<u>19</u> / 18.8	<u>17</u> / 16.8	<u>11</u> / 10.9	<u>7</u> / 6.9
$\chi^2 = 18.32$ Sig. @ .005 C = .18							

### Ethnicity with Second Testing Interaction Question Mutual Choice Score Strengths

	0 - 9 Strength	10 - 14 Strength	15 - 19 Strength	20 - 45+ Strength
Non-Indian	<u>84</u> / 18.2	<u>113</u> / 24.5	<u>122</u> / 26.4	<u>143</u> / 31.0
Indian	<u>32</u> / 30.8	<u>27</u> / 26.0	<u>23</u> / 22.1	<u>22</u> / 21.2
$\chi^2 = 10.04$ Sig. @ .01 Gamma = -.23				

APPENDIX XII-i, Page 1

Indian Integration - Non-Integration with First Testing  
Quartile Positions

Chi-Square Significant @ .0000-.01 Levels

Indian Integration with First Testing Total Individual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Integrated	<u>3</u> / 6.0	<u>9</u> / 18.0	<u>15</u> / 30.0	<u>23</u> / 46.0
Non-Integrated	<u>22</u> / 28.9	<u>18</u> / 23.7	<u>19</u> / 25.0	<u>17</u> / 22.4

$X^2 = 14.04$   
Sig. @ .002  
Gamma = -.48

Indian Integration with First Testing Interaction Individual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Integrated	<u>2</u> / 4.0	<u>8</u> / 16.0	<u>17</u> / 34.0	<u>23</u> / 46.0
Non-Integrated	<u>22</u> / 28.9	<u>20</u> / 26.3	<u>16</u> / 21.1	<u>18</u> / 23.7

$X^2 = 17.84$   
Sig. @ .0005  
Gamma = -.52



APPENDIX XII-1, Page 2

Indian Integration - Non-Integration with First Testing  
Quartile Positions

Chi-Square Significant @ .0000-.01 Levels

Indian Integration with First Testing Total Mutual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Integrated	<u>2</u> / 4.0	<u>11</u> / 22.0	<u>18</u> / 36.0	<u>19</u> / 38.0
Non-Integrated	<u>23</u> / 30.3	<u>19</u> / 25.0	<u>19</u> / 25.0	<u>15</u> / 19.7

$\chi^2 = 15.56$   
Sig. @ .001  
Gamma = -.48

Indian Integration with First Testing Interaction Mutual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Integrated	<u>2</u> / 4.0	<u>13</u> / 26.0	<u>19</u> / 38.0	<u>16</u> / 32.0
Non-Integrated	<u>23</u> / 30.3	<u>19</u> / 25.0	<u>18</u> / 23.7	<u>16</u> / 21.1

$\chi^2 = 14.02$   
Sig. @ .002  
Gamma = -.41

# APPENDIX XII-ii

Indian Integration with First Testing Structural Positioning  
on Lyon-Kite Graphics and Interaction Question  
Mutual Choice Strengths  
Chi-Square Significant @ .0000 - .01 Levels

## Integration with First Testing Structural Positioning on Lyon-Kite Graphics

	Isolate	Pair	Dangler	File Member	Triad Member	Quadrangle Member	Clique Member
Integrated	<u>13</u> / 27.1	<u>6</u> / 12.5	<u>12</u> / 25.0	<u>4</u> / 8.3	<u>7</u> / 14.6	<u>0</u> / 0.0	<u>6</u> / 12.5
Non-Integrated	<u>5</u> / 6.8	<u>0</u> / 0.0	<u>10</u> / 13.7	<u>16</u> / 21.9	<u>0</u> / 0.0	<u>13</u> / 17.8	<u>29</u> / 39.7
$\chi^2 = 48.97$ Sig. @ .0000 C = .53							

APPENDIX XIII-1, Page 1

Indian Integration - Non-Integration with Second Testing  
Quartile Positions

Chi-Square Significant @ .0000-.01 Levels

Indian Integration with Second Testing Total Individual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Integrated	<u>4</u> / 9.1	<u>6</u> / 13.6	<u>11</u> / 25.0	<u>23</u> / 52.3
Non-Integrated	<u>22</u> / 28.6	<u>22</u> / 28.6	<u>17</u> / 22.1	<u>16</u> / 20.8

$\chi^2 = 16.36$   
Sig. @ .001  
Gamma = -.54

Indian Integration with Second Testing Interaction Individual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Integrated	<u>1</u> / 2.3	<u>8</u> / 18.2	<u>11</u> / 25.0	<u>24</u> / 54.5
Non-Integrated	<u>23</u> / 29.9	<u>23</u> / 29.9	<u>16</u> / 20.8	<u>15</u> / 19.5

$\chi^2 = 23.14$   
Sig. @ .0000  
Gamma = -.64

APPENDIX XIII-i, Page 2

Indian Integration - Non-Integration with Second Testing  
Quartile Positions

Chi-Square Significant @ .0000-.01 Levels

Indian Integration with Second Testing Total Mutual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Integrated	<u>2</u> / 4.5	<u>9</u> / 20.5	<u>15</u> / 34.1	<u>18</u> / 40.9
Non-Integrated	<u>17</u> / 28.3	<u>16</u> / 26.7	<u>16</u> / 26.7	<u>11</u> / 18.3

$X^2 = 13.37$   
Sig. @ .003  
Gamma = -.51

Indian Integration with Second Testing Interaction Mutual Quartile Scores

	1st Quartile Position	2nd Quartile Position	3rd Quartile Position	4th Quartile Position
Integrated	<u>5</u> / 11.4	<u>7</u> / 15.9	<u>12</u> / 27.3	<u>20</u> / 45.5
Non-Integrated	<u>17</u> / 28.3	<u>16</u> / 26.7	<u>15</u> / 25.0	<u>12</u> / 20.0

$X^2 = 10.17$   
Sig. @ .01  
Gamma = -.45

# APPENDIX XIII-ii

Indian Integration with Second Testing Structural Positioning on  
Lyon-Kite Graphics and Interaction Question Mutual Choice Strengths  
Chi-Square Significant @ .002-.01 Levels

Integration with Second Testing Structural Positioning on Lyon-Kite Graphics							
	Isolate	Pair	Dangler	File Member	Triad Member	Quadrangle Member	Clique Member
Integrated	<u>14</u> / 32.6	<u>3</u> / 7.0	<u>13</u> / 30.2	<u>6</u> / 14.0	<u>2</u> / 4.7	<u>4</u> / 9.3	<u>1</u> / 2.3
Non-Integrated	<u>8</u> / 13.8	<u>0</u> / 0.0	<u>9</u> / 15.5	<u>13</u> /22.4	<u>15</u> / 25.9	<u>7</u> / 12.1	<u>6</u> /10.3
$\chi^2 = 20.49$ Sig. @ .002 C = .41							

# APPENDIX XIV-1

Changes in Structural Quartile Position from First  
to Second Testing with Morale Indices  
Significant at Least @ .09 Level

Interaction Mutual Choice Quartile Changes with Peer Morale				Interaction Mutual Choice Quartile Changes with School Anxiety Morale			
	Endorsement	Sometimes	No Endorsement		Endorsement	Sometimes	No Endorsement
Downward Mobility	60/ 37.5 ___/ 38.0	44/ 27.5 ___/ 29.1	56/ 35.0 ___/ 23.3	Downward Mobility	54/ 33.8 ___/ 35.1	79/ 49.4 ___/ 27.8	27/ 16.9 ___/ 24.3
Stability	60/ 24.8 ___/ 38.0	69/ 28.5 ___/ 45.7	113/ 46.7 ___/ 47.1	Stability	56/ 23.1 ___/ 36.4	127/ 52.5 ___/ 44.7	59/ 24.4 ___/ 53.2
Upward Mobility	38/ 25.9 ___/ 24.1	38/ 25.9 ___/ 25.2	71/ 48.3 ___/ 29.6	Upward Mobility	44/ 29.9 ___/ 28.6	78/ 53.1 ___/ 27.5	25/ 17.0 ___/ 22.5
$\chi^2 = 10.21$ Sig. @ .04 Gamma = .15				$\chi^2 = 8.07$ Sig. @ .08 Gamma = .03			



# APPENDIX XIV-11

Changes in Structural Quartile Position from First  
to Second Testing with Morale Indices  
Significant at Least @ .09 Level

Interaction Mutual Choice Quartile Changes  
with School Dropout Morale

	Endorsement	Sometimes	No Endorsement
Downward Mobility	52/ 32.5 ___/ 25.4	66/ 41.3 ___/ 29.3	42/ 26.3 ___/ 35.3
Stability	92/ 38.0 ___/ 44.9	108/ 44.6 ___/ 48.0	42/ 17.4 ___/ 35.3
Upward Mobility	61/ 41.5 ___/ 29.8	51/ 34.7 ___/ 22.7	35/ 23.8 ___/ 29.4
$\chi^2 = 7.85$ Sig. @ .09 Gamma = -.08			

APPENDIX XV -1

Changes in Structural Quartile Position from  
First to Second Testing with PSA Indices  
Significant at Least @ .02 Level

Total Group Individual Choice Quartile Changes with Learning-Others PSA				Interaction Group Mutual Choice Quartile Changes with Learning-Others PSA			
	Endorsement	Sometimes	No Endorsement		Endorsement	Sometimes	No Endorsement
Downward Mobility	34/ 27.9 / 20.7	69/ 56.6 / 27.1	19/ 15.6 / 14.4	Downward Mobility	37/ 24.7 / 21.3	77/ 51.3 / 30.0	36/ 24.0 / 27.3
Stability	91/ 29.2 _/ 55.5	136/ 43.6 _/ 53.3	85/ 27.2 _/ 64.4	Stability	79/ 29.8 _/ 45.4	126/ 47.5 _/ 49.0	60/ 22.6 _/ 45.5
Upward Mobility	39/ 33.3 _/ 23.8	50/ 42.7 _/ 19.6	28/ 23.9 _/ 21.2	Upward Mobility	58/ 39.2 _/ 33.3	54/ 36.5 _/ 21.0	36/ 24.3 _/ 27.3
$\chi^2 = 9.26$ Sig. @ .05 Gamma = .01				$\chi^2 = 9.41$ Sig. @ .05 Gamma = -.10			

# APPENDIX XV-ii

Changes in Structural Quartile Position from  
First to Second Testing with PSA Indices  
Significant at Least @ .02 Level

Total Group Individual Choice Quartile Changes with Learning-Self-Others PSA				Interaction Group Mutual Choice Quartile Changes with Significant Others: Family PSA			
Endorsement		Sometimes	No Endorsement	Endorsement		Sometimes	No Endorsement
Downward Mobility	27/ 22.1 ___/ 16.6	68/ 55.7 ___/ 23.1	27/ 22.1 ___/ 28.7	Downward Mobility	71/ 43.3 ___/ 26.6	50/ 30.5 ___/ 28.1	43/ 26.2 ___/ 40.6
Stability	107/ 34.3 ___/ 65.6	166/ 53.2 ___/ 56.5	39/ 12.5 ___/ 41.5	Stability	123/ 51.9 ___/ 46.1	70/ 29.5 ___/ 39.3	44/ 18.6 ___/ 41.5
Upward Mobility	29/ 24.8 ___/ 17.8	60/ 51.3 ___/ 20.4	28/ 23.9 ___/ 29.8	Upward Mobility	73/ 48.7 ___/ 27.3	58/ 38.7 ___/ 32.6	19/ 12.7 ___/ 17.9
$\chi^2 = 14.64$ Sig. @ .005 Gamma = -.01				$\chi^2 = 11.67$ Sig. @ .02 Gamma = -.11			

APPENDIX XVI-i, Page 1

Changes in Structural Quartile Position from  
First to Second Testing with TDLB Indices

Total Group Individual Choice Quartile Changes with Authority TDLB			Total Group Mutual Choice Quartile Changes with Teacher-Pupil-Interaction TDLB		
	Less Endorsement	More Endorsement		Less Endorsement	Sometimes More Endorsement
Downward Mobility	22/ 18.6 ___/ 35.5	96/ 81.4 ___/ 19.8	Downward Mobility	53/ 35.6 ___/ 32.5	51/ 34.2 ___/ 20.6 45/ 30.2 ___/ 33.3
Stability	33/ 10.5 ___/ 53.2	280/ 89.5 ___/ 57.9	Stability	65/ 25.3 ___/ 39.9	131/ 51.0 ___/ 52.8 61/ 23.7 ___/ 45.2
Upward Mobility	7/ 6.1 ___/ 11.3	108/ 93.9 ___/ 22.3	Upward Mobility	45/ 32.1 ___/ 27.6	66/ 47.1 ___/ 26.6 29/ 20.7 ___/ 21.5
	$\chi^2 = 9.60$ Sig. @ .008 Gamma = .35			$\chi^2 = 12.43$ Sig. @ .01 Gamma = -.03	

APPENDIX XVI-1, Page 2

Changes in Structural Quartile Position from  
First to Second Testing with TDLB Indices

Total Group Mutual Choice Quartile Changes  
with Authority Task TDLB

Total Group Mutual Choice Quartile Changes  
with Small Group TDLB

	Less Endorsement	Sometimes	More Endorsement		Less Endorsement	Sometimes	More Endorsement
Downward				Downward			
Mobility	39/ 26.2 ___/ 30.7	86/ 57.7 ___/ 27.0	24/ 16.1 ___/ 23.8	Mobility	51/ 34.2 ___/ 32.3	71/ 47.7 ___/ 24.4	27/ 18.1 ___/ 27.8
Stability	47/ 18.3 ___/ 37.0	155/ 60.3 ___/ 48.7	55/ 21.4 ___/ 54.5	Stability	75/ 29.2 ___/ 47.5	146/ 56.8 ___/ 50.2	36/ 14.0 ___/ 37.1
Upward				Upward			
Mobility	41/ 29.3 ___/ 32.3	77/ 55.0 ___/ 24.2	22/ 15.7 ___/ 21.8	Mobility	32/ 22.9 ___/ 20.3	74/ 52.9 ___/ 25.4	34/ 24.3 ___/ 35.1
		$\chi^2 = 8.12$ Sig. @ .08 Gamma = -.02				$\chi^2 = 10.12$ Sig. @ .03 Gamma = .13	

# APPENDIX XVI-ii

Changes in Structural Quartile Positions from  
First to Second Testing with TDLB Indices  
Significant at least @ .08 Level

Total Group Mutual Choice Quartile Changes with Teacher-Pupil-Task TDLB				Total Group Mutual Choice Quartile Changes with Expressive-Liking-Task TDLB			
	Less Endorsement	Sometimes	More Endorsement		Less Endorsement	Sometimes	More Endorsement
Downward Mobility	39/ 26.2 ___/ 23.2	80/ 53.7 ___/ 28.0	30/ 20.1 ___/ 32.5	Downward Mobility	57/ 38.3 ___/ 36.1	62/ 41.6 ___/ 23.9	30 / 20.1 ___/ 23.3
Stability	85/ 33.1 ___/ 50.6	140 / 54.5 ___/ 49.0	32/ 12.5 ___/ 34.8	Stability	64/ 24.9 ___/ 40.5	127/ 49.4 ___/ 49.0	66 / 25.7 ___/ 51.2
Upward Mobility	44/ 31.4 ___/ 26.2	66/ 47.1 ___/ 23.1	30/ 21.4 ___/ 32.6	Upward Mobility	37/ 26.4 ___/ 23.4	70/ 50.0 ___/ 27.0	33 / 23.6 ___/ 25.6
$\chi^2 = 8.12$ Sig. @ .08 Gamma = -.03				$\chi^2 = 8.92$ Sig. @ .06 Gamma = .11			



# APPENDIX XVII

Changes in Structural Quartile Position  
with Conformity to Classroom  
Significant @ .0001-.03 Levels

Total Group Individual Choice Quartile Changes with Conformity to Classroom				Interaction Group Mutual Choice Quartile Changes with Conformity to Classroom			
	Endorsement	Sometimes	No Endorsement		Endorsement	Sometimes	No Endorsement
Downward Mobility	36/ 29.8 ___/ 25.9	52/ 43.0 ___/ 25.6	33/ 27.3 ___/ 16.1	Downward Mobility	49/ 30.4 ___/ 35.5	54/ 33.5 ___/ 26.6	58/ 36.0 ___/ 28.3
Stability	73/ 23.5 ___/ 52.5	95/ 30.6 ___/ 46.8	142/ 45.8 ___/ 69.3	Stability	56/ 23.7 ___/ 40.6	80/ 33.9 ___/ 39.4	100/ 42.4 ___/ 48.8
Upward Mobility	30/ 25.9 ___/ 21.6	56/ 48.3 ___/ 27.6	30/ 25.9 ___/ 14.6	Upward Mobility	33/ 22.1 ___/ 23.9	69/ 46.3 ___/ 34.0	47/ 31.5 ___/ 22.9
$\chi^2 = 23.11$ Sig. @ .0001 Gamma = .01				$\chi^2 = 10.08$ Sig. @ .03 Gamma = .01			

# APPENDIX XVIII

Total Group Structure Based upon Individual and Mutual Choices  
with Initiates Action to Non-Indian Peers  
Significant at least @ .02 Level

Total Group Structure Based on Individual Choices with Initiates Action to Non-Indian Peers		
	Low Initiation Action	High Initiation Action
High Structure	<u>13</u> / 40.6	<u>19</u> / 59.4
Low Structure	<u>20</u> / 69.0	<u>9</u> / 31.0
$\chi^2 = 3.86$ Q Coefficient = -.52 Significance @ .02 (Fisher's Exact)		

Total Group Structure Based on Mutual Choices with Initiates Action to Non-Indian Peers		
	Low Initiation Action	High Initiation Action
High Structure	<u>15</u> / 42.9	<u>20</u> / 57.1
Low Structure	<u>18</u> / 69.2	<u>8</u> / 30.8
$\chi^2 = 3.19$ Q Coefficient = -.50 Significance @ .03 (Fisher's Exact)		

# APPENDIX XIX

Interaction Question Probed Structure Based on Individual Choices  
with Receives Action from Indian Peers and Initiates Action to Non-Indian Peers  
Significant at least @ .08 Level

## Interaction Question Probed Structure Based on Individual Choices with Receives Action From Indian Peers

	Low Initiation Action	High Initiation Action
High Structure	<u>9</u> / 37.5	<u>15</u> / 62.5
Low Structure	<u>11</u> / 64.7	<u>6</u> / 35.3
$X^2 = 1.98$ Q Coefficient = -.50 (Fisher's Exact) Sig. @ .08		

## Interaction Question Probed Structure Based on Individual Choices with Initiates Action to Non-Indian Peers

	Low Initiation Action	High Initiation Action
High Structure	<u>12</u> / 38.7	<u>19</u> / 61.3
Low Structure	<u>21</u> / 70.0	<u>9</u> / 30.0
$X^2 = 4.83$ Q Coefficient = -.57 (Fisher's Exact) Sig. @ .01		

# APPENDIX XX

Interaction Question Probed Structure Based on Mutual Choices  
with Initiates Action to and Receives Action from Teacher  
Significant at Least @ .01 Level

Interaction Question Probed Structure Based on Mutual Choices with Initiates Action to Teacher		
	Initiates Low Action	Initiates High Action
High Structure	<u>1</u> / 11.1	<u>8</u> / 88.9
Low Structure	<u>5</u> / 62.5	<u>3</u> / 37.5
$\chi^2 = 3.00$ Q Coefficient = -.86 (Fisher's Exact) Sig. @ .04		

Interaction Question Probed Structure Based on Mutual Choices with Action Received from Teacher		
	Receives Low Action	Receives High Action
High Structure	<u>4</u> / 19.0	<u>17</u> / 81.0
Low Structure	<u>10</u> / 58.8	<u>7</u> / 41.2
$\chi^2 = 4.79$ Q Coefficient = -.71 (Fisher's Exact) Sig. @ .01		

# APPENDIX XXI

## Interaction Questions' Mutual Choice Strengths with Initiates Action to Teacher and Socio-Emotional Positive Action Significant at Least @ .06 Level

Interaction Questions' Mutual Choice Strengths with Initiates Action to Teacher		
	Initiates Low Action	Initiates High Action
High Structure	<u>5</u> / 100.0	<u>0</u> / 0.0
Low Structure	<u>1</u> / 14.3	<u>6</u> / 85.7

$$X^2 = 5.48$$

$$Q \text{ Coefficient} = 1.00$$

(Fisher's Exact) Sig. @ .008

Interaction Questions' Mutual Choice Strengths with Socio-Emotional Positive Action		
	Low SES Action	High SES Action
High Structure	<u>22</u> / 91.7	<u>2</u> / 8.3
Low Structure	<u>20</u> / 71.4	<u>8</u> / 28.6

$$X^2 = 2.22$$

$$Q \text{ Coefficient} = .62$$

(Fisher's Exact) Sig. @ .06

# APPENDIX XXII

Total Group Structural Changes, First and Second Testings (Based on Individual Choices Those Video-Taped) with Receives Action from Teacher and Those (Based on Mutual Choices Those Video-Taped) with Total Receives Action  
Significant at Least @ .02 Level

Total Group Structural Changes, First and Second Testings (Based on Individual Choices - Those Video-Taped) with Receives Action from Teacher

	Low Receives Action from Teacher	High Receives Action from Teacher
Downward Mobility	<u>5</u> / 71.4	<u>2</u> / 28.6
Stable	<u>3</u> / 16.7	<u>15</u> / 83.3
Upward Mobility	<u>5</u> / 45.5	<u>6</u> / 54.5
$X^2 = 7.15$ Gamma = .14 Sig. @ .02		

Total Group Structural Changes, First and Second Testings (Based on Mutual Choices - Those Video-Taped with Total Receives Action

	Low Receives Total Action	High Receives Total Action
Downward Mobility	<u>5</u> / 41.7	<u>7</u> / 58.3
Stable	<u>15</u> / 65.2	<u>8</u> / 34.8
Upward Mobility	<u>16</u> / 84.2	<u>3</u> / 15.8
$X^2 = 6.02$ Gamma = -.55 Sig. @ .04		



# APPENDIX XXIII

## First Video Analysis Ethnicity with Initiates Action to Indian Peers, to Non-Indian Peers and Socio-Emotional Positive Action Significant at Least @ .07 Level

<u>Ethnicity with Initiates Action to Indian Peers</u>			<u>Ethnicity with Initiates Action to Non-Indian Peers</u>		
	<u>Low Initiation Action</u>	<u>High Initiation Action</u>		<u>Low Initiation Action</u>	<u>High Initiation Action</u>
Non-Indian	<u>5</u> / 83.3	<u>1</u> / 16.7	Non-Indian	<u>22</u> / 44.0	<u>28</u> / 56.0
Indian	<u>13</u> / 38.2	<u>21</u> / 61.8	Indian	<u>11</u> / 68.8	<u>5</u> / 31.3
$\chi^2 = 2.56$ (Fisher's Exact) Sig. @ .05 Q Coefficient = .77			$\chi^2 = 2.06$ (Fisher's Exact) Sig. @ .07 Q Coefficient = -.47		

<u>Ethnicity with Positive Socio-Emotional Behavior</u>		
	<u>Less Positive</u>	<u>More Positive</u>
Non-Indian	<u>29</u> / 93.5	<u>2</u> / 6.5
Indian	<u>21</u> / 72.4	<u>8</u> / 27.6
$\chi^2 = 3.41$ (Fisher's Exact) Sig. @ .03 Q Coefficient = .69		

# APPENDIX XXIV

Indians Only in Integrated - Non-Integrated Classrooms  
with First Video Analysis  
Significant at Least @ .07 Level

Indians in Integrated - Non-Integrated with Action Initiated to Indian Peers		
	Initiates Less Action	Initiates More Action
Integrated	<u>8</u> / 66.7	<u>4</u> / 33.3
Non-Integrated	<u>5</u> / 22.7	<u>17</u> / 77.3
$\chi^2 = 4.62$ Sig. @ .02 Q Coefficient = .74		

Indians in Integrated - Non-Integrated with Positive Socio-Emotional		
	Initiates Less Action	Initiates More Action
Integrated	<u>15</u> / 93.8	<u>1</u> / 6.3
Non-Integrated	<u>6</u> / 46.2	<u>7</u> / 53.8
$\chi^2 = 5.99$ Sig. @ .007 Q Coefficient = .89		

Indians in Integrated - Non-Integrated with Action from Indian Peers		
	Receives Less Action	Receives More Action
Integrated	<u>10</u> / 83.3	<u>2</u> / 16.7
Non-Integrated	<u>6</u> / 26.1	<u>17</u> / 73.9
$\chi^2 = 8.29$ Sig. @ .002 Q Coefficient = .86		

Indians in Integrated - Non-Integrated with Total of All Interaction		
	Less Interaction	More Interaction
Integrated	<u>11</u> / 39.3	<u>17</u> / 60.7
Non-Integrated	<u>4</u> / 17.4	<u>19</u> / 82.6
$\chi^2 = 1.97$ Sig. @ .07 Q Coefficient = .50		

# Appendix XXV

Ethnicity with Total Elaborated Code  
and Content Questions - Elaborated Code  
Significant at least @ .05 Level of Significance

## Ethnicity with Total Elaborated Code

	Less Elaborated Code	More Elaborate Code
Non-Indians	<u>21</u> / 38.2	<u>34</u> / 61.8
Indians	<u>23</u> / 69.7	<u>10</u> / 30.3

$$x^2 = 8.19$$

Sig. @ .03

Q Coefficient = -.57

## Ethnicity with Content Questions - Elaborated Code

	Less Elaborated Code	More Elaborate Code
Non-Indians	<u>10</u> / 71.4	<u>4</u> / 28.6
Indians	<u>9</u> / 100.0	<u>0</u> / 0.0

$$x^2 = 3.11$$

Yates Correction 1.50

Sig. @ .05 (Fisher Exact Test)

Q Coefficient = -1.0

Appendix XXVI

Indians in Integrated and Non-Integrated  
Classrooms with Total Restricted Code  
Significant @ .011 level of Significance

	Low	Medium	High
Indians in Integrated Classrooms	<u>2</u> / 8.3	<u>14</u> / 58.3	<u>8</u> / 33.3
Indians in Non-Integrated Classrooms	<u>9</u> / 47.4	<u>5</u> / 26.3	<u>5</u> / 26.3

$x^2 = 8.94$   
 Sig. @ .011  
 Gamma = -.45

# Appendix XXVII

Integrated Classes Only: Non-Indians and Indians  
with Total Elaborated Code, Total No Answer, and  
Ethnicity with Present Verb Questions - Elaborated Code

## Integrated Classes Only:

Non-Indians - Indians with Total Elaborated Code

	Low Elaborated Code	High Elaborated Code
Non-Indians	<u>21</u> / 38.2	<u>34</u> / 61.8
Indians	<u>15</u> / 75.0	<u>5</u> / 25.0

$x^2 = 7.96$   
Yates Correction 6.57  
Sig. @ .03  
Q Coefficient = -.65

Integrated Classes Only: Total No Answer

	Low Elaborated Code	High Elaborated Code
Non-Indians	<u>11</u> / 73.3	<u>4</u> / 26.7
Indians	<u>6</u> / 35.3	<u>11</u> / 64.7

$x^2 = 4.63$   
Yates Correction 3.22  
Chi square Sig. = .19  
Fisher Exact Test Sig. = .03  
Q Coefficient = .66

Integrated Classes Only: Ethnicity with Present Verb Questions - Elaborated Code

	Low Elaborated Code	High Elaborated Code
Non-Indians	<u>11</u> / 78.6	<u>3</u> / 21.4
Indians	<u>0</u> / 0.0	<u>2</u> / 100.0

$x^2 = 5.02$   
Yates Correction 2.03  
Chi square Sig. = .36  
Fisher Exact Test Sig. = .084  
Q Coefficient = 1.00

# Appendix XXVIII-i

Ethnicity with Written Endings to Story Stem:  
 Number of Simple Sentences, Number of Compound-Complex Sentences, Number  
 of Concrete Nouns, Restricted Code, Global Code, and Total Story Length  
 Significant at least @ .0007 Level of Significance

Ethnicity with Number of Simple Sentences						Ethnicity with Restricted Code					
	Low		Medium		High		Low		Medium		High
Non-Indians	<u>109</u>	33.9	<u>103</u>	32.0	<u>110</u> 34.2	Non-Indians	<u>92</u>	28.6	<u>127</u>	39.4	<u>103</u> 32.0
Indians	<u>47</u>	60.3	<u>16</u>	20.5	<u>15</u> 19.2	Indians	<u>42</u>	53.8	<u>27</u>	34.6	<u>9</u> 11.5
$x^2 = 18.48$ Sig. @ .0001 Gamma = -.41						$x^2 = 21.73$ Sig. @ .0000 Gamma = -.47					
Ethnicity with Number of Compound-Complex Sentences						Ethnicity with Global Code					
	Low		Medium		High		Low		Medium		High
Non-Indians	<u>78</u>	24.1	<u>106</u>	32.7	<u>140</u> 43.2	Non-Indians	<u>71</u>	23.4	<u>93</u>	30.7	<u>139</u> 45.9
Indians	<u>38</u>	48.7	<u>24</u>	30.8	<u>16</u> 20.5	Indians	<u>40</u>	54.1	<u>15</u>	20.3	<u>19</u> 25.7
$x^2 = 21.65$ Sig. @ .0000 Gamma = -.45						$x^2 = 26.98$ Sig. @ .0000 Gamma = -.44					



# Appendix XXVIII-ii

Ethnicity with Written Endings to Story Stem:  
 Number of Simple Sentences, Number of Compound-Complex Sentences, Number  
 of Concrete Nouns, Restricted Code, Global, And Total Story Length

Ethnicity with Number of Concrete Nouns						Ethnicity with Total Story Length: No. of Words					
	Low		Medium		High	Words:	0 - 19	20 - 59	60 - 99	100-160 or more	
Non-Indians	<u>87</u>	26.9	<u>111</u>	34.4	<u>125</u> 38.7	Non-Indians	<u>60</u>	18.5	<u>109</u>	33.6	<u>76</u> 23.5 <u>79</u> 24.4
Indians	<u>38</u>	49.4	<u>18</u>	23.4	<u>21</u> 27.3	Indians	<u>37</u>	47.4	<u>20</u>	25.6	<u>13</u> 16.7 <u>8</u> 10.3
$x^2 = 14.54$ Sig. @ .0007 Gamma = -.32						$x^2 = 30.14$ Sig. @ .0000 Gamma = -.44					

# Appendix XXIX

Indian Pupils Only: Integrated - Non-Integrated Classrooms with Number of Concrete Nouns, Number of Abstract Nouns, Elaborated Code, and Total Story Length  
Significant at least @ .0005 Level of Significance

## Indian Pupils Only: Integrated - Non-Integrated Classrooms with Number of Concrete Nouns

	Low	Medium	High
Integrated Classrooms	4/16.0	10/40.0	11/44.0
Non-Integrated Classrooms	34/65.4	8/15.4	10/19.2

$x^2 = 16.51$   
Sig. @ .0003  
Gamma = -.64

## Indian Pupils Only: Integrated - Non-Integrated Classrooms with Elaborated Code

	Lower	Higher
Integrated Classrooms	15/57.7	11/42.3
Non-Integrated Classrooms	48/92.3	4/ 7.7

$x^2 = 13.37$   
Yates Correction 11.23  
Sig. @ .004  
Q Coefficient -.79

## Indian Pupils Only: Integrated - Non-Integrated Classrooms with Number of Abstract Nouns

	Lower	Higher
Integrated Classrooms	19/73.1	7/26.9
Non-Integrated Classrooms	52/100.0	0/00.0

$x^2 = 15.38$   
Yates Correction 12.26  
Sig. @ .002  
Q Coefficient = -1.0

## Indian Pupils Only: Integrated - Non-Integrated Classrooms with Total Story Length: No. of Words

Words:	0 - 19	20 - 59	60 - 99	100-160 or more
Integrated Classrooms	3/11.5	6/23.1	10/38.5	7/26.9
Non-Integrated Classrooms	34/65.4	14/26.9	3/ 5.8	1/ 1.9

$x^2 = 32.37$   
Sig. @ .0000  
Gamma = -.84

# Appendix XXX

Integrated Classes Only: Ethnicity with Number  
of Simple Sentences and Restricted Code  
Significant at least @ .01 Level of Significance

Integrated Classes Only: Ethnicity with Number of Simple Sentences				Integrated Classes Only: Ethnicity with Restricted Code			
	Low	Medium	High		Low	Medium	High
Non-Indians	<u>109</u> /33.9	<u>137</u> /42.5	<u>76</u> /23.6	Non-Indians	<u>92</u> /28.6	<u>127</u> /39.4	<u>103</u> /32.0
Indians	<u>19</u> /73.1	<u>5</u> /19.2	<u>2</u> / 7.7	Indians	<u>14</u> /53.8	<u>9</u> /34.6	<u>3</u> /11.5
$x^2 = 15.98$ Sig. @ .0003 Gamma = -.62				$x^2 = 8.49$ Sig. @ .01 Gamma = -.47			

Appendix XXXI-i

Picture Inferences to Story Stem:  
 Sex with Amount of Determination Inferences  
 Age with Time and Amount of Determination Inferences  
 Significant at least @ .04 Level of Significance

Sex with Amount of Determination Picture Inferences			
	"Being driven to city" Picture	"Taking a nap" Picture	"Thumbing a ride" Picture
Male	<u>54</u> / 28.7	<u>19</u> / 10.1	<u>115</u> / 61.2
Female	<u>46</u> / 26.0	<u>7</u> / 4.0	<u>124</u> / 70.1

$x^2 = 6.19$   
 Sig. @ .04  
 Gamma = .15

# Appendix XXXI-11

Picture Inferences to Story Stem:  
 Sex with Amount of Determination Inferences  
 Age with Time and Amount of Determination Inferences  
 Significant at least @ .04 Level of Significance

## Age with Time Picture Inferences

	"Clock" Picture	"George Riding in A Vehicle" Picture	"Food" Picture
11 yr. or younger	<u>27</u> / 51.9	<u>8</u> / 15.4	<u>17</u> / 32.7
12 yr.	<u>72</u> / 64.3	<u>17</u> / 15.2	<u>23</u> / 20.5
13 yr.	<u>74</u> / 67.3	<u>13</u> / 11.8	<u>23</u> / 20.9
14 yr.	<u>52</u> / 68.4	<u>18</u> / 23.7	<u>6</u> / 7.9
15 yr. and older	<u>21</u> / 75.0	<u>4</u> / 14.3	<u>3</u> / 10.7

$x^2 = 17.57$   
 Sig. @ .02  
 Gamma = -.18

## Age with Amount of Determination Picture Inferences

	"Being Driven to City" Picture	"Taking a Nap" Picture	"Thumbing a Ride" Picture
11 yr. or younger	<u>19</u> / 36.5	<u>9</u> / 17.3	<u>24</u> / 46.2
12 yr.	<u>30</u> / 26.8	<u>4</u> / 3.6	<u>78</u> / 69.6
13 yr.	<u>26</u> / 23.6	<u>7</u> / 6.4	<u>77</u> / 70.0
14 yr.	<u>17</u> / 21.8	<u>2</u> / 2.6	<u>59</u> / 75.6
15 yr. and older	<u>8</u> / 28.6	<u>3</u> / 10.7	<u>17</u> / 60.7

$x^2 = 20.98$   
 Sig. @ .007  
 Gamma = .15

# Appendix XXXII

Picture Inferences to Story Stem:  
 Ethnicity with Distance Inferences and Indian Integration with  
 Distance, Time, and Amount of Determination Inferences  
 Significant at least @ .08 Level of Significance

Ethnicity with Distance Inferences			Indian Integration with Time Inferences				
	"Car" Picture	"Over 20 miles" Picture	"?" Picture		"Clock" Picture	"George riding in a vehicle" Picture	"Food" Picture
Non-Indians	<u>40</u> / 12.4	<u>215</u> / 66.6	<u>68</u> / 21.1	Integrated Classes	<u>16</u> / 64.0	<u>3</u> / 12.0	<u>6</u> / 24.0
Indians	<u>4</u> / 5.4	<u>63</u> / 85.1	<u>7</u> / 9.5	Non-Integrated Classes	<u>39</u> / 81.3	<u>6</u> / 12.5	<u>3</u> / 6.3
$x^2 = 9.89$ Sig. @ .007 Gamma = -.11			$x^2 = 4.85$ Sig. @ .08 Gamma = -.43				

Indian Inferences with Distance Inferences			Indian Integration with Amount of Determination Inferences				
	"Car" Picture	"Over 20 miles" Picture	"?" Picture		"Being driven to city" Picture	"Taking a nap" Picture	"Thumbing a ride" Picture
Integrated Classes	<u>2</u> / 8.0	<u>17</u> / 68.0	<u>6</u> / 24.0	Integrated Classes	<u>9</u> / 37.5	<u>4</u> / 16.7	<u>11</u> / 45.8
Non-Integrated Classes	<u>2</u> / 4.1	<u>46</u> / 93.9	<u>1</u> / 2.0	Non-Integrated Classes	<u>17</u> / 34.0	<u>1</u> / 2.0	<u>32</u> / 64.0
$x^2 = 10.21$ Sig. @ .006 Gamma = -.48			$x^2 = 6.14$ Sig. @ .04 Gamma = .23				



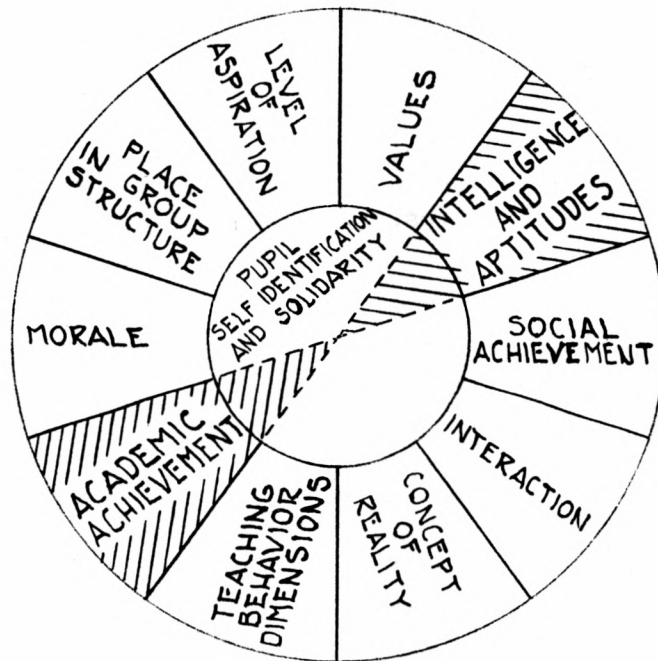


Part IV

Achievement and Achievement Prediction  
for Indian and Non-Indian Students

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RECOMMENDATIONS  
ACHIEVEMENT AND ACHIEVEMENT PREDICTION  
FOR  
INDIAN AND NON-INDIAN STUDENTS

1. Efforts should be made to develop more effective predictors of school achievement for native pupils.

In particular, a need exists to go beyond the use of standardized testing batteries to actual school achievement. If this is done, more careful attention must be given to the establishment of school grades.

Further testing of differences between Indian and non-Indian pupils does not seem to be feasible as differences appear to be clearly established revealing the Indian pupil as testing below the non-Indian pupil. If further comparisons are required, they should be directed at areas where Indian pupils show specific strengths.

2. An effort should be made to isolate individual differences among Indian pupils. For example, a cross-sectional or longitudinal study of a selected sample of Indian children would indicate if there are stages at which attitudes, motivational complexes and sets begin to diverge. Such information would be particularly useful where intervention may be planned.
3. Information regarding the relationship between achievement and such factors as motivation, aspiration, self-perception, attitude and teacher perception needs to be obtained. Secondary analyses of the data collected by the research team should be made to search out such relationships.

The hypothesis that achievement depends extensively on expectations native pupils hold for themselves and on the expectations held for them by others needs to be investigated.

4. An extensive program of intervention is needed in native education. There is no real evidence that Indian pupils cannot achieve as well as non-Indian pupils.

Rather than a broad study of factors influencing native education, an intensive search of particular areas should be made.

It is proposed that a team of researchers and teachers work in one specific location over a period of time to gain pertinent information. It is suggested that a school be selected as a demonstration unit and that the school be staffed by a team of teachers and researchers whose job it will be to plan a comprehensive program of intervention and evaluation. The team would concentrate on setting objectives, setting criteria to measure achievement of objectives, and attempting to alter self-concepts

and motivational patterns. The basic problem should be that of studying reinforcement contingencies as little seems to be known about these factors for Indian children. This problem implies a function which almost equally emphasizes teaching and counseling; therefore, the team should include teachers and counsellors who can reach the pupils and their parents to gain their involved commitment to learning.

Many studies have been conducted to determine the achievement characteristics of various cultural and sub-cultural groups. One of the most difficult tasks in such a study is the selection of criteria. Such criteria must possess validity both in terms of content and prediction. Furthermore they must be criteria which are readily measurable -- that is, reliable instruments must be available. It is well known that instruments constructed for one cultural group may not be valid for use with other groups. These problems are true both of the predictor and criterion variables so that it is difficult to obtain both ability measures, such as intelligence tests, and achievement measures which are comparable from group to group even within a school.

One purpose of this study is to compare the achievement of Indian and non-Indian pupils. Another purpose is to determine if existing tests can be used to predict academic success as it is presently defined. It should be pointed out that this study is not to be considered as definitive because much of what has been found here has been reported by various researchers. This study was conducted primarily to determine a base line from which further research could be conducted.

#### Sample

It was originally planned that this study would report data for all Indian and non-Indian pupils for Grades VII-IX tested in the schools

described elsewhere in this report. Unfortunately, the number of Indian pupils available in Grades VIII and IX was too small to be statistically meaningful. It was decided, therefore, that only the Grade VII samples would be discussed here. Consequently, this report is based on the results of testing 54 Indian and 223 non-Indian children in Grade VII. Again it was not possible to divide Indian pupils according to rural or urban status and therefore these groups were pooled. A cursory analysis of the data does not suggest any differences among various Indian groups as far as this study is concerned. The trends in the non-Indian data also do not suggest any major differences in Grades VIII and IX. Analyses did show, however, that there were significant sex differences. Therefore, the data are presented by sex and cultural groupings. Only those cases where complete data on each individual were available have been included in the study.

#### Procedure

In May and June of 1969 the author and his assistant tested all the available subjects in the sample. All pupils were given the Lorge Thorndyke Intelligence Test, the Safran Culturally Reduced Intelligence Test, the Ravens Progressive Matrices, and various sub-sections of the Canadian Tests of Basic Skills. The latter were used as achievement



measures in view of the fact that school marks would be difficult to interpret due to lack of standardization.

The scores on these tests were punched on IBM cards. These cards were submitted to the computer to determine means and standard deviations, inter-correlations and regression coefficients as well as multiple correlation coefficients for all variables.

### Results

In the first phase of the study we attempted to look only at the means and standard deviations for the various achievement and ability measures. Because considerable differences appeared among the various cultural groups and between males and females in the sample, this report consistently breaks all data down into six groups: total Indian population, total non-Indian population, Indian males, non-Indian males, Indian females, and non-Indian females. As mentioned above, since very few Indians were available in the Grade VIII and IX sample, these are referred to only in passing and the major emphasis in this report will be on the Grade VII population.

Table I presents the means and standard deviations for achievement and ability scores for the Grade VII sample divided on the basis of sex and cultural group. The following measures are included: age, Canadian

TABLE I

MEANS AND STANDARD DEVIATIONS OF SCORES ACHIEVED BY GRADE VII MALE AND FEMALE INDIAN AND NON-INDIAN GROUPS ON TESTS OF ACHIEVEMENT AND ABILITY

VARIABLE	Non-Ind N= 223	Ind N= 54	Non-Ind M N= 116	Ind M N= 25	Non-Ind F N= 107	Ind F N= 29
	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$
	s.d.	s.d.	s.d.	s.d.	s.d.	s.d.
Age	12.44 .72	13.65 1.07	12.53 .76	13.56 1.12	12.35 .66	13.72 1.03
Voc	27.48 8.38	16.54 7.70	27.61 8.67	20.24 9.41	27.35 8.09	13.34 3.70
RC	42.52 14.52	28.30 12.74	41.06 15.05	31.08 15.73	44.09 13.83	25.89 9.08
Sp	26.20 10.10	21.66 8.62	23.36 9.83	22.36 9.08	29.28 9.50	21.07 8.31
Cap	21.64 8.56	15.54 6.07	19.84 8.17	15.68 7.27	23.58 8.58	15.41 4.95
Punct	18.74 7.64	13.77 5.43	16.55 7.17	13.84 6.09	21.11 7.47	13.72 4.91
U	15.87 7.16	11.28 6.00	13.61 6.52	11.76 7.38	18.32 7.04	10.86 4.59
MC	23.43 8.15	13.63 5.67	23.61 8.66	14.80 7.01	23.24 7.59	12.62 4.07
MPS	13.61 4.99	8.54 3.37	13.94 4.87	8.76 3.83	13.25 5.12	8.34 2.97
LThV	49.26 11.60	34.35 11.11	48.13 11.61	36.68 14.26	50.50 11.51	32.34 7.08
LThN-V	42.84 11.97	31.67 12.04	41.50 11.97	35.00 11.10	44.30 11.86	28.79 12.25
SCRIT	47.99 7.33	36.91 10.79	47.39 6.95	37.00 11.76	48.64 7.71	36.83 10.10
RPM	42.17 7.04	33.76 9.06	41.76 6.66	34.84 9.31	42.61 7.43	32.83 8.90

Tests of Basic Skills - Vocabulary (Voc), Reading Comprehension (RC), Spelling (Sp), Capitalization (Cap), Punctuation (Punct), Usage (U), Mathematics Comprehension (MC), Mathematic Problem Solving (MPS) - and the four intelligence measures discussed above - (LThV), (LThN-V), (SCRIT), and (RPM). The table presents all results in raw score form. The reader may obtain a rough estimate of the meaning of these figures by referring to the appropriate test norms. Significant differences referred to in the discussion are based on data presented in paired columns separated by double lines.

It should be noted at the outset that there is a considerable age difference between the Indian and non-Indian groups. While the difference has some effect on the statistical analysis, because of consistent negative correlations with all achievement and ability variables, it will not be taken into further account in this study. This position is taken here because it is difficult to trace these effects specifically and because they have no immediate bearing on the purpose of this study.

The first two columns in Table I indicate the means and standard deviations for all variables for Indian and non-Indian groups. In all cases the data indicate that non-Indians made higher scores on the tests used ( $p < .001$ ). There is no reason to believe, from these data, that Indian pupils, as a whole, perform relatively better in any particular achievement area. Inspection of intelligence test scores indicates that the same patterns hold here. That is, there does not appear to be any advantage which accrues from using so-called culturally-reduced or culture-fair tests of intelligence. The complete picture regarding

this problem cannot, of course, be obtained by an inspection of the means. More will be said of this later.

Columns 3 and 4 of Table I compare Indian and non-Indian males. Here the pattern changes somewhat and it is interesting to note that differences, significant at the .05 level, do not appear for Spelling and Usage. Punctuation scores differ significantly at the .05 level, Capitalization at the .005 level, and all other variables differ beyond the .001 level. The ability of Indian males to score as well as non-Indians on the Spelling and Usage subtests is difficult to explain. If any trend is indicated here, it is that Indian males are able to achieve as well as non-Indian males on mechanical aspects of language skills. It may, of course, indicate that there has been an emphasis on this aspect of teaching language skills. This latter possibility is also supported by the fact that Indian females performed at about the same level on these mechanical skills while performing more poorly on others.

Columns 5 and 6 of Table I show the comparison between Indian and non-Indian females. In this case all differences were significant beyond the .0001 level. This difference is not unexpected. What is of some importance, however, is that in non-mechanical skill areas such as Vocabulary, Reading Comprehension, and Ability measures the Indian females performed much more poorly than did the Indian males. The only exception to this finding is in the area of Mathematics Concepts and Mathematics Problem Solving, where the difference was not significant.

This finding is especially interesting when we note that non-Indian females outperform non-Indian males in all cases, again with the exception of the Mathematics tests. This may suggest that the Indian females in this sample were atypical or that there is a cultural bias operating to depress the achievement and ability scores of Indian females in certain areas. The fact that Indian males and females perform about equally well on SCRIT and the Ravens Progressive Matrices and on the Mathematics tests suggests that this rather more abstract area--which is not as amenable to instruction--is one which is not as affected by sex differences, cultural biases, or instructional emphasis.

In order to determine the relationship between various ability and achievement measures Pearson product-moment correlation coefficients were determined for all groups on all variables. Tables II-V contain the correlation matrices for Indian and non-Indian male and female groups.

The intercorrelations of scores made by Indian males is presented in Table II. While averaging correlation coefficients without transformation is a somewhat questionable statistical procedure, it may nevertheless be useful here in order to summarize the results of the analysis. In terms of correlating ability measures with the eight achievement measures the average  $r$ 's are as follows: SCRIT 49.5; RPM 41.4; LThV 39.1; and LThN-V 29.5. This suggests that of the four intelligence measures SCRIT is probably the most useful. At the same time it must be pointed out that this is still a very weak predictor and a more useful one would probably be Reading Comprehension (average  $r = 76.0$ ) or perhaps even Vocabulary (average  $r = 64.9$ ). The latter



TABLE II  
PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS  
FOR SCORES ON ABILITY AND ACHIEVEMENT MEASURES--INDIAN MALES

N=25\*

TEST	RC	Sp	Cap	Punct	U	MC	MPS	LThV	LThN-V	SCRIT	RPM
Voc	.84	.56	.56	.58	.53	.74	.73	.54	.30	.54	.46
RC		.66	.76	.70	.69	.83	.84	.45	.42	.59	.52
Sp			.79	.69	.52	.41	.63	.37	.25	.35	.42
Cap				.76	.62	.50	.65	.43	.29	.46	.47
Punct					.72	.56	.54	.28	.39	.43	.38
U						.65	.66	.20	.08	.43	.21
MC							.80	.29	.27	.53	.32
MPS								.57	.36	.63	.53
LThV									.59	.51	.57
LThN-V										.55	.64
SCRIT											.67

\*when  $r = .38$   $p < .05$

when  $r = .49$   $p < .01$



would have the advantage of being a very short test which can be given to any group in about 15 minutes. In any case, it is fairly clear that for this sample at least the usual measures of ability are not too satisfactory for the purpose of predicting achievement on standardized tests.

Table III presents the correlation data for non-Indian males. In this case there appears to be a somewhat more normal pattern of results, at least in terms of what is usually expected in such studies. The highest correlations seem to be between LThV and the achievement measures (average  $r = 59.8$ ) and the LThN-V (average  $r = 50.5$ ). In the case of the non-Indian sample, however, the SCRIT and RPM measures do not correlate well with achievement (average  $r$ 's 29.5 and 32.1 respectively). Apparently ability measures which relate to school-like tasks are better predictors for those tasks for non-Indian males. Why this difference between the two groups of males should exist is a topic which needs further investigation.

While the highest correlations between ability and achievement measures were obtained for the LThV and the LThN-V, it should also be noted that the achievement measures intercorrelated at a fairly high level. For example, the average correlations between Spelling and Math Concepts taken with the other seven variables were both 50.3--that is, almost as great as with the LThV and LThN-V. Vocabulary and Reading Comprehension were almost as high. This suggests again, as in the Indian male sample, that one of the sub-tests of the CTBS may be as useful as a

TABLE III  
PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS  
FOR SCORES ON ABILITY AND ACHIEVEMENT MEASURES--NON-INDIAN MALES

N=116\*

TEST	RC	Sp	Cap	Punct	U	MC	MPS	LThV	LThV-N	SCRIT	RPM
Voc	.70	.55	.56	.46	.45	.62	.28	.70	.46	.21	.30
RC		.52	.52	.30	.49	.65	.49	.75	.57	.37	.46
Sp			.72	.67	.58	.55	.43	.62	.50	.29	.27
Cap				.64	.52	.58	.43	.61	.50	.32	.31
Punct					.60	.45	.37	.43	.43	.17	.19
U						.48	.41	.52	.48	.25	.32
MC							.69	.66	.56	.41	.42
MPS								.50	.54	.34	.30
LThV									.71	.51	.39
LThN-V										.54	.44
SCRIT											.44

\* when  $r = .18$   $p < .05$

when  $r = .24$   $p < .01$

predictor of achievement as one can find.

Table IV contains the correlations between ability and achievement measures for Indian females. The findings in this case are not very consistent. This may be due to the possibility that this group was atypical, as suggested above, or to some other reason related to the testing situation itself. In any case, what does appear is that no measure used in this study consistently correlated with the others. The highest average correlation between ability and achievement measures appears to be that for the LThV where the average  $r$  was 47.3. This correlation, as expected, dropped sharply for the mathematics tests. The remaining ability measures do not appear to be useful. Average correlation coefficients were as follows: LThN-V 32.1; RPM 28.6 and SCRIT 16.4. It should also be noted that many of the correlations were not significantly different from zero and some were even slightly negative.

It is difficult to explain why SCRIT should perform so well with the Indian males and so poorly with Indian females. It is, of course, possible that this is a sex-related or culturally-affected variable. A factor analytic study appears to be indicated in order to determine the basis for this finding.

Correlations among achievement measures are also difficult to summarize here. Generally speaking intercorrelations are much lower here than for the two groups previously described. It is also difficult to explain the rather consistently low correlations for the two mathematics tests. It appears that somewhat different abilities are involved in the

TABLE IV  
PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS  
FOR SCORES ON ABILITY AND ACHIEVEMENT MEASURES--INDIAN FEMALES

N=29\*

TEST	RC	Sp	Cap	Punct	U	MC	MPS	LThV	LThV-N	SCRIT	RPM
Voc	.37	.39	.19	.28	.50	.18	.19	.63	.24	.10	.39
RC		.42	.43	.41	.67	.23	.26	.59	.42	.23	.35
Sp			.54	.75	.39	.17	.22	.57	.31	.03	.19
Cap				.40	.31	.22	.22	.34	.22	-.03	-.08
Punct					.59	.03	.42	.59	.47	.30	.26
U						-.02	.31	.70	.66	.31	.44
MC							-.03	.16	.06	-.08	-.22
MPS								.20	.19	.33	.36
LThV									.59	.43	.46
LThN-V										.41	.50
SCRIT											.40

\*when  $r = .36$   $p < .05$

when  $r = .46$   $p < .01$

mathematics performance of Indian females. Aside from the case of the Mathematics tests, however, it seems that once again sub-tests of the CTBS Battery can be used to predict performance almost as well as ability tests.

Table V summarizes the correlational findings for non-Indian females. In this case the data are extremely consistent. Average  $r$ 's between ability and achievement measures are as follows: LThV 51.8; LThN-V 48.6; SCRIT 47.3 and RPM 46.0. This suggests that for non-Indian females one measure of ability is about as good as another in terms of predicting achievement. It appears also that all specific achievement areas can be predicted about equally well by each ability measure.

What is of considerable interest again, however, is that several of the achievement measures appear to correlate at a higher level with other achievement measures than they do with ability measures. For example, the average correlation between Vocabulary and the other seven achievement measures is 60.9 and that for Reading Comprehension is 58.5. This suggests again that such measures may be more efficient when the area of concern is the prediction of academic achievement.

Another purpose of the correlation phase of this study was to determine the amount of correlation among ability measures for the various groups. Examination of these correlation coefficients, as presented in Tables II to V, indicates a fairly modest intercorrelation. No great differences between Indian and non-Indian samples are evident. The slightly lower correlations for Indian females are probably not significant but may be related to other discrepancies noted for this

TABLE V

PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS  
FOR SCORES ON ABILITY AND ACHIEVEMENT MEASURES--NON-INDIAN FEMALES

N=107\*

TEST	RC	Sp	Cap	Punct	U	MC	MPS	LThV	LThN-V	SCRIT	RPM
Voc	.77	.64	.54	.58	.50	.68	.55	.58	.48	.54	.51
RC		.61	.51	.49	.55	.64	.53	.61	.54	.56	.55
Sp			.55	.65	.50	.65	.61	.53	.42	.44	.41
Cap				.56	.47	.55	.37	.37	.40	.34	.42
Punct					.58	.68	.60	.48	.49	.44	.41
U						.49	.48	.54	.48	.37	.43
MC							.70	.52	.57	.61	.56
MPS								.51	.51	.48	.39
LThV									.69	.51	.55
LThN-V										.65	.65
SCRIT											.66

\*when  $r = .19$   $p < .05$ when  $r = .24$   $p < .01$



group above. Further study with larger, more comprehensive samples is needed to clarify this problem. In general, these rather typical correlations, taken in conjunction with other findings noted in this study, suggest that ability measures of this type have only limited value in predicting academic achievement. In fact, there is considerable evidence that this is even more the case for Indian groups.

What then can one conclude regarding the choice of predictors of academic achievement? Another way of attacking the problem is to carry out a regression analysis. In this case a step-wise regression analysis was performed using four ability measures and all eight achievement measures both as predictor and criterion variables. In this way it is possible to determine what contribution each variable makes to the variance of another, while at the same time taking account of or partialling out intercorrelations among other variables. It also provides Multiple Correlations ( $R$ 's) for the purpose of indicating the total amount of variance which can be accounted for when all available variables are used as predictors. Table VI provides a summary of Multiple  $R$ 's and the percentage of variance contributed by each predictor variable to each criterion variable for all six sample groups. Predictor variables have been listed only when they account for at least five per cent of the variance.

Taken individually the predictor variables which significantly predict achievement are rather scattered. It does seem clear, however, that for the most part the useful predictors are not IQ measures but rather the achievement measures themselves. For the Indian population

TABLE VI

MULTIPLE R'S, PREDICTOR VARIABLES, AND AMOUNT OF VARIANCE ACCOUNTED  
FOR WITH EACH VARIABLE USED AS PREDICTOR AND CRITERION AND FOR ALL SAMPLE GROUPS

Dependent Variable	Total Indian	% Var	Total Non-Indian	% Var	Male Indian	% Var	Male Non-Indian	% Var	Female Indian	% Var	Female Non-Indian	% Var
Voc R Crit	.81 RC LThV	53 06	.80 RC MC	52 06	.93 RC	70	.83 RC Punct	49 07	.79 LThV	40	.83 RC MC	59 06
RC R Crit	.90 Voc Cap U	53 14 06	.83 Voc LThV	52 09	.91 MPS Voc	71 11	.85 LThV Voc	57 06	.77 U MC	44 06	.83 Voc	59
Sp R Crit	.81 Punct Cap	51 09	.80 Punct RC	48 10	.87 Cap	62	.81 Cap Punct	62 08	.87 Punct Cap	56 07	.78 MC Punct RC	43 08 05
Cap R Crit	.78 Sp RC	46 10	.74 Sp Punct	43 05	.92 Sp U LThN-V	57 10 05	.79 Sp MC	52 05	.68 Sp RPM RC	29 07 05	.68 Punct RC	32 07
Punct R Crit	.84 Sp U	45 07	.79 Sp U	48 08	.89 Punct MPS LThN-V	51 10 08	.79 Sp U	45 07	.88 Sp U	56 11	.79 MC U	46 08
U R Crit	.77 RC Punct	46 11	.72 Punct RC	40 09	.92 RC Cap	69 05	.71 Punct RC	36 11	.88 LThV RC LThN-V	48 10 08	.69 Punct RC	33 09

TABLE I  
(Continued)

Dependent Variable	Total Indian	% Var	Total Non-Indian	% Var	Male Indian	% Var	Male Non-Indian	% Var	Female Indian	% Var	Female Non-Indian	% Var
MC R Crit	.77 RC RPM Voc	45 05 05	.83 MPS Voc	.47 16	.95 RC	71	.84 MPS Voc	47 20	.58 RPM LThN-V RC Voc U	10 08 05 05 05	.84 MPS Voc	48 13
MPS R Crit	.76 RC SCRIT	40 06	.73 MC	47	.88 LThN-V MPS MC Voc	34 15 08 07	.77 MC Voc	47 05	.81 SCRIT Punct LThV Voc	12 06 06 05	.76 MC Sp	48 05
LThV R Crit	.76 Voc LThN-V	33 16	.82 LThN-V RC	50 13	.91 RPM LThN-V RC SCRIT Punct	40 07 07 05 05	.88 RC LThN-V	57 12	.90 U Voc SCRIT Sp	48 11 07 06	.79 LThN-V Voc	48 08
LThN-V R Crit	.73 RPM LThV	32 10	.79 LThV SCRIT	50 08	.84 RPM MC	45 11	.78 LThV MPS	51 05	.81 U RPM LThV	44 05 05	.81 LThV SCRIT	48 12
SCRIT R Crit	.71 RPM MPS	29 08	.68 LThN-V RPM	36 08	.80 RPM LThN-V	45 11	.65 LThN-V RPM	29 05	.74 LThV MPS Sp Voc	19 08 07 07	.78 RPM LThN-V	43 09
RPM R Crit	.74 LThN-V SCRIT	31 08	.66 SCRIT RC	31 08	.72 LThN-V Voc	30 10	.58 RC SCRIT	21 09	.77 LThN-V MC Voc MPS Cap	25 09 08 05 05	.75 SCRIT LThN-V	43 68

Reading Comprehension and Vocabulary seem to produce the best results. This is in accord with the findings of the correlation analysis described above. A further analysis can, of course be made of the data, but it is clear that it would show that a combination of two or three of the CTBS sub-tests would account for most of the variance in the other abilities. Such a conclusion could, of course, only be definitely established by a study involving a large number of Indian subjects.

It should also be noted that the prediction of mathematics scores for Indian females appears not to be very stable or comprehensive. This is undoubtedly related to some of the problems already noted above.

The pattern for non-Indian subjects is similar in that IQ scores do not appear to be outstanding as predictors. Again, ability measures seem to perform this function more adequately, and it seems reasonable to conclude that here also some combination of achievement measures might be the most efficient method of proceeding.

Finally, it is also possible to look at the ability measures themselves to see how well they predict one another. In general, it appears that the best predictor of such a measure is another measure of the same kind. While in a few instances an achievement measure has substantial variance in common with an ability measure, it is nevertheless true that another ability measure is more often in this position. There seems to be some validity to the distinction made by the LThV and LThN-V tests in the sense that the SCRIT and RPM have more in common with the LThN-V than with the LThV. However, since the latter two intercorrelate with each other fairly extensively, a strong case cannot be made to the effect that they measure a basically different

ability. In any case, it seems fair to conclude, as have other researchers, that standardized tests of intellectual ability leave much to be desired as predictors of achievement, especially for Indian pupils. Experience with such tests also suggests that it is not fruitful to devote more time to the development of yet other tests of general mental ability.

#### Discussion and Implications

The major purposes of this study were to find out more about the achievement of certain Indian groups in southern Alberta schools, to compare these to those of non-Indian groups, and to make a start toward selecting tests which might better predict achievement than those currently in use. Many of the results have not been surprising in the light of previous research which is well known, but others may be of considerable interest to educators and researchers who will continue in this work.

It is obvious that Indian children do less well in school related tasks than do non-Indians. Additionally, the findings reported above provide no evidence to suggest that there are areas where this difference is not substantial. This may, of course, be due to the selection of the tests used in this study. While it is true that such strengths may appear in tests measuring abilities required in various vocations, it seems rather futile to assume that Indian children cannot achieve in those areas usually described as academic and to follow this by emphasizing vocational training at the expense of academic instruction. At this time it is not clear whether this weakness on the part of Indian pupils is due to a cultural bias, some motivational factor, or hereditary difference. The research literature certainly does not support the latter, and the



problems of cultural attitude and motivational deficits can most probably be overcome by various forms of carefully planned intervention.

Another factor which may account for the low performance qualities of Indian pupils is probably related to poor test-writing skills. While there is no direct evidence for this, it was the author's observation that Indian pupils were frequently poorly oriented to writing tests and quite often resorted to wholesale guessing, sometimes from the very outset of the testing period. Whether this is a matter of poor rapport with the tester or a part of a more general attitudinal complex needs to be investigated before the validity of any test can be established.

A somewhat less expected finding in this study was that of sex differences in ability between male and female Indians. The direction of these results was the opposite to that usually found in non-Indian populations. A number of conjectures can be made as to the cause of this difference. Firstly, it is possible that cultural differences are operating to discriminate against the female. There is, thus, some possibility that females in an Indian culture are not as highly valued as males. One possible way of determining this may be through a secondary analysis of the data of this study combined with the self-concept data reported elsewhere by Dr. R. L. Hertzog. Secondly, there is the possibility that teacher attitudes have some bearing on the problem--for example, teachers may hold differing expectations for Indian males if they perceive their role to be that of preparing Indian males for the job market. Not only will this result in certain expectations, to which pupils respond in Pygmalion fashion, but it may cause teachers to stress these skills with



males through drill and verbal reinforcement. Again, more light may be shed on this problem through a secondary analysis of these data combined with those being presented by Dr. L. C. Lyon and Dr. J. Friesen. Finally, it is possible that the sex differences are artifactual. The N's are, after all, fairly small and the groups differ in heterogeneity. More data needs to be collected before a firm hypotheses can be established. There is, nevertheless, enough evidence here to suggest that the common practice of studying Indian males only is not a sound one on which to proceed.

A substantial amount has already been said about the problem of predicting academic success. The data presented in this study suggest that certain basic achievement measures can be used more effectively than traditional intelligence measures, especially for the Indian population. The reasons why this should be the case are not patently clear, but what does seem to be true is that ability measures, even when corrected for cultural loading, are not as useful as might be hoped. However, before this hypothesis can be verified further data need to be collected. Other achievement variables, including technical and other academic skills, need to be measured with larger samples. In addition a number of affective and motivational variables need to be examined. There seems to be some promise that once this is accomplished various combinations of variables can be used to produce valid predictors. In the meantime educators must be prepared to live with the rather limited predictive validity supplied by known measures.

On the basis of some tentative conclusions drawn from the data

it is now possible to propose a number of areas which should be subjected to further research:

1. If the data presented above possess any validity, it should be possible to develop more effective predictors of school achievement. This can be done by using various achievement measures such as those contained in the Canadian Tests of Basic Skills. In addition, efforts should be made to look at other kinds of school achievement. For example, it is important to go beyond the use of standardized batteries to actual school achievement, but if this is to be done then more careful attention must be given to the establishment of school grades. Additionally larger samples of Indian pupils are needed. There does not seem to be any need for further testing of non-Indian pupils. The differences are clearly established and research can now go forward with concentration on Indian samples only. If further comparisons are required, they should be directed at areas where Indian pupils may show specific strengths.

2. It was not possible in this study to compare Indian groups from various geographic areas. It is the author's opinion that this sort of comparison is not particularly fruitful. What may be of some merit, however, is to carry out research in an effort to isolate individual differences among Indian pupils. For example, a cross-sectional or longitudinal study of a selected sample of Indian children would indicate if there are stages at which attitudes, motivational complexes and sets begin to diverge. Such information would be particularly useful where intervention was planned.

3. Several secondary analyses of the data collected by the research team can now be carried out. These could be directed at eliciting information about the relationship between achievement and such factors as motivation, aspiration, self-perception, attitude, teacher perception, etc. The hypothesis that achievement depends extensively on the expectations people hold for themselves and on the expectations held for them by others needs to be investigated.

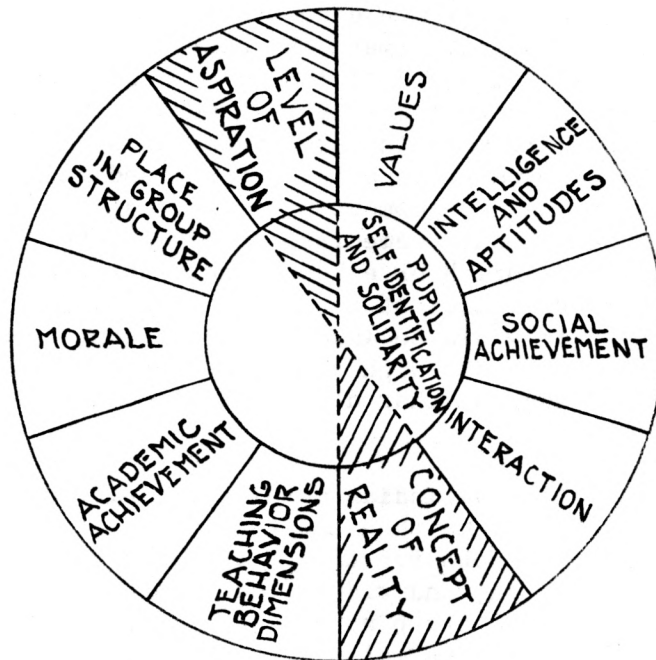
4. All of the views expressed above indicate the need for a rather extensive program of intervention. There is no real evidence that Indian pupils cannot achieve equally as well as non-Indians. At the same time, there is ample evidence that they are not doing so. It is this author's opinion that further testing on a broad basis will be of little consequence. What would be more effective would be to select a team of researchers and teachers to work in one specific location over a period of time. Such a team would concentrate on setting objectives, setting criteria to measure achievement of objectives, attempting to alter self-concepts and motivational patterns, etc. A basic problem here is the study of reinforcement contingencies, for it is apparent that little is known about these factors for Indian children. This implies a function which almost equally emphasizes teaching and counseling. Basically, what is being proposed here is that a school be selected as a demonstration unit, that this school be staffed by a team of teachers and researchers whose job it will be to plan a comprehensive program of intervention and evaluation, and that we now proceed to dealing with specific problems while ignoring the broadside approach used in the past.

Part V

Aspiration and Self-Concept

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## RECOMMENDATIONS

### ASPIRATION AND SELF-CONCEPT

The results of the Aspiration and Self-Concept Study lead one to conclude that there are a number of possibilities for further consideration.

1. Motivation by itself is a necessary but not sufficient requirement for success. It would seem logical that a necessary subsequent step would be a secondary analysis of the data, particularly of Dr. W.R. Unruh's data combined with these data. This would allow one to analyze the convergence and divergence between basic skills and abilities and motivation, values, and self-image. The results of this analysis would allow one to isolate those people who would benefit most from programmed intervention. The following implication deals more specifically with this problem.
2. It is obvious from the data that there are those Indian students who exhibit little, if any, difference from their corresponding peers. It would seem that now the focus of study and concentration should be upon intra-Indian analysis. By now it is established that Indian and non-Indian differences do exist and the information is extensive enough to indicate the areas in which these differences exist. Consequently, it would seem reasonable to isolate those Indian students who approximate the characteristics of non-Indians from those who are highly deficient in the same areas and study the patterns of convergence in both groups. This would probably, in addition, require more intensive testing of individual Indian students to determine areas of competence and weakness. This would allow for the development of individualized programmed intervention which would remediate or develop the behaviors of the low group and enrich or enhance the high group which approximates the characteristics of the non-Indians. It is this author's contention that it would be inadvisable to continue to treat the Indians as a group. The high variability found in core characteristics would suggest that differential considerations are indicated.
3. It is apparent that the Indian males are coping more adequately with educational demands than are the Indian females. There are undoubtedly many reasons for this. It would appear, though, that greater concentration, individualized programmes, and engineered socialization through group approaches are indicated. This undoubtedly applies to both males and females; this, however, seems to be more applicable to the females since there are indications that they consider themselves undervalued and hence might be receiving less concern and consideration in their educational achievement. The data indicate that the females are a more dissonant group. This requires further consideration.



4. The data indicate that these Indians are not too dissimilar in their aspirations from those of the non-Indians. Their support behaviors, however, are inadequate for the demands of these aspirations. It would seem feasible to investigate the reinforcement contingencies that would aid in the development of motives and academic behaviors which would facilitate attainment of these goals. This would require some kind of developmental approach. Since the interests of the Indians and non-Indians are relatively convergent, it would appear that, in addition to development of skills and abilities, intensive group approaches and counseling would be beneficial. The implications of these are indicated below.
5. It is apparent that the Indian students do have some degree of educational orientation or acceptance. It also seems likely that these motives will not continue to develop over time. Consequently, it would appear that an intensive individual and group counseling intervention programme, integrated with the individual's programme, could be beneficial. This would include not only vocational counseling, but emphasis on personal, social, and academic development. Such integration should not be limited to the classroom or school.
6. The deficiencies of the Indians seem to have strong cultural basis. It would seem reasonable, then, to conclude that much greater attention to the social climate and organization of the school should be paid in order to develop the necessary attitudes, values, motives, and behaviors necessary for success. Generally, this would involve an individual approach to learning, including such things already mentioned as analysis of abilities and characteristics, individual remediation, programmed instruction, non-graded sequencing, individual and group counseling, team approaches, and integration of interests with school programmes and wider social concerns.



Teachers concerned with improving a child's motivation for learning realize that there are many forces acting upon the pupil's life. The values, expectations, and ways of behaving accepted by significant others in the child's world will, in part, constitute the field of forces within which the teacher hopes to exert influence. In addition, the relative opportunities available to individuals in the social structure will have differential effects upon behavior. Cultural and psychological factors also influence the individual's willingness to develop and exploit his talent, intelligence, and opportunities. The perceptions of possibilities that an individual acquires, and his relationship to them, are, in part, a function of differences in the motives and values of social and cultural groups.

More than motivation, though, is required. The individual must learn certain kinds of support behavior which prepare him to translate motive into action. There must be some awareness of and willingness to undertake the steps necessary for goal attainment. Such steps involve, among other things, a preparedness to plan, to work, and to delay gratification. Many studies reveal a significant relationship between achievement motivation and accomplishment, and between values and educational aspiration. This fact is of more than academic interest. There is a nexus, although not a perfect one, between educational and vocational achievement in our society. How an individual views himself, what he aspires to, and the kinds of instrumental behaviors that support these motivations will influence the probability of achieving success.

The task of this study is threefold: to make a preliminary attempt at determining (1) whether Indian and non-Indian adolescents are dissimilar with regard to vocational aspiration; (2) whether there are dissimilarities between Indian and non-Indian adolescents with regard to self-perceptions; and (3) whether the kinds of support behaviors for vocational aspiration and self-perception in Indian and non-Indian adolescents differ.

### Sample

The Indian and non-Indian students tested come from schools in various areas of southern Alberta. These areas include: Calgary, Canmore, Cluny, Exshaw, Gleichen, Springbank, Standard, and Strathmore. Specifications are given in Table I.

TABLE I  
SAMPLE SIZES

<u>Grade</u>	<u>Indians</u>	<u>Non- Indians</u>
7	49 (males=21)	223 (males=116)
8	11	99
9	--	59

### Instruments

All subjects were administered the following scales.

1. The Survey of Study Habits and Attitudes. This instrument is composed of the following subscales:

- (a) Work Methods
- (b) Delay Avoidance

- (c) Teacher Approval
- (d) Education Acceptance
- 2. Occupational Scale.
- 3. Self-Concept Scale. This scale allows measures of:
  - (a) This is the way I am.
  - (b) This is the way I'd like to be.
- 4. Safran Vocational Interest Test. This test provides measures of the following vocational interests:
  - (a) Economic
  - (b) Technical
  - (c) Outdoor
  - (d) Service
  - (e) Humane
  - (f) Artistic
  - (g) Scientific
- 5. Aberdeen Inventory.
- 6. Rosen Scale.
- 7. Buxton Scale.
- 8. Semantic Differential. This instrument is composed of 15 concepts, each with 21 scales. Because of the complexity, no detailed analysis of these data is included in this report.

Because of the nature of the problem under investigation, scales were chosen which assumed a minimum of reading ability.

A description and a copy of each of the instruments are given in Appendices A to H.

### Analysis

For this study, the variables are defined as scores on the following:

1. Age
2. Work Methods
3. Delay Avoidance
4. Teacher Approval
5. Education Acceptance
6. Occupational Scale
7. This is the way I am.
8. This is the way I'd like to be.
9. Economic
10. Technical
11. Outdoor
12. Service
13. Humane
14. Artistic
15. Scientific
16. Aberdeen Inventory
17. Rosen Scale
18. Buxton Scale

As stated in the problem, the dependent variables of primary concern in this study are: (1) vocational aspiration (variable 6), and (2) self-concept (a) actual self-concept (variable 7) (b) ideal self-concept (variable 8).

The support behaviors which form the independent variables are:

1. academic behaviors (variables 2-5);
2. vocational interests (variables 9-15);
3. achievement motivation (variables 16 and 18); and
4. achievement value orientation (variable 17).

For each of the samples, the following were obtained:

1. means and standard deviations of the variables;
2. Pearson product-moment correlation matrices; and
3. stepwise regression analysis, using the dependent variables as criteria.

## Results

Because of the problem of Indian sampling in grades eight and nine, the emphasis of this study is upon the grade seven Indian and non-Indian students. Wherever possible, grade eight and nine results are included in the report.

### A. Grade Seven: Total Samples.

The means, standard deviations, and levels of significance of the differences between means are reported in Table III. Of the 18 variables, 11 are significantly different at  $p \leq .05$  level. Among the dependent variables, there is no significant difference between the two groups on vocational aspiration and perceived actual self, while the non-Indians score higher on perceived ideal self. Thus, it would appear that the non-Indians experience more dissatisfaction with themselves than do the Indians; that is, the Indians have less discrepancy between actual and ideal self than do the non-Indians. The Indians, however, exhibit greater variability of ratings of ideal self than do the non-Indians. As groups, the Indians and non-Indians are similar in terms of vocational aspiration and perceived self-image, with the non-Indians exhibiting more dissatisfaction with self than do the Indians.

In terms of support behavior, the Indians score markedly lower on all four measures of academic behavior, achievement value orientation, and one measure of achievement motivation. The implications of this are that Indians have more of a passivistic--present--familistic orientation, while non-Indians have more of an activistic--future--individualistic orientation. These characteristics are much less likely to ensure success or accomplishment for the Indians than for the non-Indians.

TABLE II

## MEANS AND STANDARD DEVIATIONS OF GRADE SEVEN SAMPLES

Variables	Non-Indians (N = 223)		Indians (N=49)		Significance of Difference Between Means
	Mean	S.D.	Mean	S.D.	
Age	12.44	0.72	13.80	1.03	.0001
Work Methods	21.69	9.79	16.69	6.24	.0001
Delay Avoidance	22.68	8.92	15.98	7.60	.0001
Teacher Approval	22.50	10.45	17.80	8.81	.0006
Education Acceptance	24.04	9.11	18.74	7.35	.0001
Vocational Aspiration	50.30	5.64	50.47	5.54	.40
Actual Self	63.56	10.68	62.76	9.61	.30
Ideal Self	77.22	8.28	73.49	10.45	.01
Economic	14.77	5.08	14.43	3.67	.26
Technical	13.16	8.18	14.14	6.15	.20
Outdoor	16.87	4.75	15.84	4.52	.06
Service	14.95	4.26	17.10	3.28	.0001
Humane	14.61	5.72	16.00	4.97	.04
Artistic	14.77	5.91	13.55	4.47	.06
Scientific	14.16	4.09	12.98	3.50	.02
Aberdeen	15.75	4.27	14.37	3.70	.008
Rosen	6.22	2.11	5.61	1.92	.03
Buxton	11.21	3.96	10.65	3.00	.16



TABLE III

## MEANS AND STANDARD DEVIATIONS OF GRADE EIGHT SAMPLES

Variables	Non-Indians (N = 99 )		Indians (N=11)		Significance of Difference Between Means
	Mean	S.D.	Mean	S.D.	
Age	13.32	0.65	14.82	0.94	.0001
Work Methods	21.99	9.51	19.36	8.15	.17
Delay Avoidance	22.49	9.62	20.27	9.09	.23
Teacher Approval	25.42	10.13	18.55	9.32	.01
Education Acceptance	25.85	8.13	18.00	7.71	.0007
Vocational Aspiration	49.95	5.76	50.36	5.01	.40
Actual Self	61.10	10.28	54.00	9.20	.008
Ideal Self	74.76	8.82	66.46	15.26	.04
Economic	14.78	5.13	12.82	2.52	.02
Technical	12.68	8.86	12.91	7.42	.47
Outdoor	17.66	5.39	16.46	4.34	.20
Service	15.60	4.00	17.64	3.47	.04
Humane	14.96	5.81	13.82	3.21	.14
Artistic	14.27	5.94	16.55	5.48	.10
Scientific	14.18	3.87	11.73	2.96	.006
Aberdeen	15.54	3.77	14.64	3.63	.22
Rosen	6.55	1.96	5.18	1.90	.01
Buxton	11.99	3.42	10.91	3.23	.14

With regard to vocational interests, the Indians score lower on service, humane, and scientific interests. On the other vocational interests scales there are no significant differences at  $p \leq .05$ . It would appear that the vocational interests of the non-Indians, as opposed to those of the Indians, emphasize to a greater extent those interests which require a greater degree of education. Since the non-Indians have also internalized the standards of excellence which support and facilitate the attainment of these interests, they are more likely to achieve their goals than are the Indians. In general, though, both groups are similar in aspirations, but the Indians do not possess the motives and support behavior which indicate successful achievement of their goals. As expected, age is a significant variable, which probably reinforces the disadvantages of the Indians.

The correlation matrices of the variables for the non-Indian and Indian samples are provided in Appendices I and J, respectively. Those correlations significant at  $p = .01$  and  $p = .05$  levels are indicated.

For the non-Indian group (Appendix I), vocational aspiration correlates positively (.01 level) with three of the four academic behavior scales, and the two measures of achievement motivation. Actual self correlates positively (.01 level) with the four academic behavior scales and the two achievement motivation scales. Ideal self correlated positively only with the actual self. Along with the previous discussion of the means, these results support the conclusion that the achievement syndrome has been significantly internalized as part of the self-image of non-Indian students.

As for the Indian students (Appendix J), vocational aspiration only correlates positively (.01 level) with ideal self and the outdoor scale (.05 level). Actual self correlates positively (.01) with one of the academic behavior scales and with ideal self. Thus, it is readily apparent that while Indians approximate non-Indians in personal and vocational aspiration, the support behaviors and motives necessary for success have not been internalized to the same extent in the Indians as in the non-Indians. They are less able to translate desire into action. That this is a cultural phenomenon is discerned by looking at the achievement value orientation scale. For the non-Indian group, this scale correlates positively (.01 level) with the academic behavior scales and achievement motivation scales. For the Indians, this scale correlates negatively (.01) with achievement motivation.

Summaries of the stepwise regression analyses done on the grade seven non-Indian and Indian samples are given in Appendices K and L, respectively. The nature of the stepwise analysis is to determine which variable(s) best predicts a given criterion, or criteria, which in this study are the dependent variables, vocational aspiration and self-concept.

For the non-Indian group, level of vocational aspiration is best predicted by delay avoidance, one of the academic behavior scales, to give a Multiple R (MR) of .26. Actual self is predicted by ideal self and the Aberdeen scale (achievement motivation), in that order, to give a MR of .51. Ideal self is predicted only by actual self (MR=.42). All these scales correlate positively with vocational aspiration (Appendix I). Again it is seen that aspiration and self image are consistent with and supported by the requisite behaviors necessary for accomplishment and self-enhancement.

In the Indian group, vocational aspiration is best predicted by the Buxton scale (achievement motivation), artistic and scientific interests scales. Multiple R of these three scales with vocational aspiration is .41. Actual self is best predicted by ideal self, delay avoidance, and outdoor interest, in that order. Multiple R is .65. Ideal self is predicted by actual self and delay avoidance, one of the academic behaviors scales. Multiple R is .49. Of these predictors, the Buxton, scientific interest, delay avoidance, and delay avoidance scales correlate positively with vocational aspiration and actual self. From this it can be seen that the Indians do approximate some of the characteristics of the non-Indian groups.

Whether the similarities and differences found in the grade seven groups continue through to grade nine is impossible to say since the grade eight Indian sample is too small to be reliable and the grade nine sample is non-existent. Table III, however, does report the results. As can be seen, there is no difference in vocational aspiration but differences, in favor of the non-Indians, do exist relevant to both actual and ideal self.

In terms of support behavior, there are no significant differences on two of the four measures of academic behavior and on the two academic motivation scales. Age, however, is still a highly significant variable, as well as achievement value orientation. As for vocational interest, the non-Indians score higher on economic, service, and scientific interests. In all, though there are greater similarities, the non-Indians still possess considerable advantage, primarily because of their age and their greater academic orientation.

This increase in similarities may be an artifact, due to the small sample size of the Indians. More likely, though, the increase is due to attrition; that is, those Indians with greater academic orientation probably will remain in school longer while the others drop out. Consequently, the characteristics of those who remain tend to approximate more closely those of the non-Indians. The only way to validate this notion is to return to the original grade seven Indian sample, determine who has left school, and then re-analyze the data.

An indication of trends is given in Tables IV and V. For the non-Indian samples, those behaviors associated with stable aspects of personality, such as aspiration, self-concept, academic motivation and orientation, and values, seem to indicate a high degree of consistency (Table IV). Vocational interests, as one would expect, do show some change, with some decline in economic, humane, and artistic interests with an increase in technical, outdoor, and scientific interests. These changes, however, are minor. The picture which emerges is one of stability and consistency. On the other hand, it appears from Table V that there is more variability apparent in the Indian groups. As discussed previously, this may be a function of sample size or attrition. While motivation, vocational aspiration, and values remain stable, there are changes in academic behavior, self-concept, and interests. As regards to interests, there is an increase in outdoor and artistic interests and decline in economic, technical, humane and scientific interests. There are also gains in most of the scales measuring academic behavior. The most outstanding change is the marked decrease in actual and ideal self-concept scores. It is tantalizing to speculate that while the Indians who do remain in school approximate the non-

TABLE IV

## MEANS OF THE NON-INDIAN SAMPLES

Variable	Grade 7 (N=223)	Grade 8 (N=99)	Grade 9 (N=59)
Age	12.44	13.32	14.46
Work Methods	21.69	21.99	19.95
Delay Avoidance	22.68	22.49	20.10
Teacher Approval	22.50	25.42	25.39
Education Acceptance	24.04	25.85	23.75
Vocational Aspiration	50.30	49.95	48.90
Actual Self	63.56	61.10	62.51
Ideal Self	77.22	74.76	76.02
Economic	14.77	14.78	13.76
Technical	13.16	12.68	15.83
Outdoor	16.87	17.66	17.90
Service	14.95	15.60	15.71
Humane	14.61	14.96	13.64
Artistic	14.77	14.27	12.14
Scientific	14.16	14.18	15.05
Aberdeen	15.75	15.54	14.54
Rosen	6.22	6.55	6.88
Buxton	11.21	11.99	10.42



TABLE V

## MEANS OF THE INDIAN SAMPLES

Variable	Grade 7 (N=49)	Grade 8 (N=11)
Age	13.80	14.82
Work Methods	16.69	19.36
Delay Avoidance	15.98	20.27
Teacher Approval	17.80	18.55
Education Acceptance	18.74	18.00
Vocational Aspiration	50.47	50.36
Actual Self	62.76	54.00
Ideal Self	73.49	66.46
Economic	14.43	12.82
Technical	14.14	12.91
Outdoor	15.84	16.46
Service	17.10	17.64
Humane	16.00	13.82
Artistic	13.55	16.55
Scientific	12.98	11.73
Aberdeen	14.37	14.64
Rosen	5.61	5.18
Buxton	10.65	10.91

Indians in the desire to succeed academically, the punishing effects of unremediated deficits in basic skills and cognitive capacities, as evidenced in Unruh's report, might be highly injurious to the Indian student's self-image. This might explain the decline in vocational interests requiring academic preparation and hence, for the Indian, promising little chance of success, and the increase in vocational interests which do provide at least some promise of success or self-enhancement. This, unfortunately, provides another area of negative reinforcement, since it is these interests which appear to be on the decline among his non-Indian peers.

The correlation matrices for the grade eight non-Indian, Indian and grade nine non-Indian samples are given in Appendices M - O, respectively. The results of the stepwise regression analyses for grades eight and nine non-Indian samples are given in Appendices P and Q, respectively. In the main, the same kinds of results as obtained in the grade seven samples are evidenced.

B. Grade Seven: Females.

The means, standard deviations, and levels of significance of the differences between means are reported in Table VI. Of the 18 variables, 9 are significantly different at  $p \leq .05$ . Of the dependent variables, there are no significant differences for vocational aspiration and self-concept. The magnitude of the discrepancy between actual and ideal self is about the same for both groups. The non-Indians, however, reveal greater variability on both measures of self-concept. Self-image of the Indian and non-Indian females, in the main, seem highly similar.

TABLE VI

## MEANS AND STANDARD DEVIATIONS FOR GRADE SEVEN FEMALES

Variables	Non-Indians (N = 107)		Indians (N=28)		Significance of Difference Between Means
	Mean	S.D.	Mean	S.D.	
Age	12.35	0.66	13.82	1.02	.0001
Work Methods	22.90	9.43	16.64	5.74	.0001
Delay Avoidance	23.79	8.53	15.07	6.45	.0001
Teacher Approval	23.16	9.34	17.61	7.90	.002
Education Acceptance	25.01	8.61	18.36	5.81	.0001
Vocational Aspiration	49.83	4.66	50.54	5.24	.26
Actual Self	62.95	11.27	61.61	8.83	.24
Ideal Self	76.50	9.54	75.21	6.54	.20
Economic	16.99	4.45	15.79	3.84	.08
Technical	6.79	5.77	11.04	5.36	.0006
Outdoor	14.73	4.06	14.61	4.00	.45
Service	15.73	3.89	17.50	2.44	.001
Humane	17.42	4.90	17.25	5.00	.46
Artistic	18.43	4.34	14.29	4.17	.0001
Scientific	13.56	3.32	13.21	3.77	.31
Aberdeen	15.80	4.18	14.75	3.74	.11
Rosen	6.56	2.08	5.61	1.75	.006
Buxton	11.56	4.05	10.75	3.14	.13

In terms of support behavior, the Indians score markedly lower on all four measures of academic behavior and achievement value orientation. There are no significant differences on the measures of achievement motivation. It would appear that the Indian females have internalized some of the motives associated with achievement, but have failed to learn the appropriate behaviors which would translate these motives into action. Part of the reason for this, of course, is cultural, as the Rosen scale indicates they have not acquired as significantly the achievement value orientation.

As for the vocational interest scales, there are significant differences on three variables (technical, service, artistic) with the Indians scoring higher on the technical and service scales. These interests probably reflect cultural factors. The lack of difference on the scientific scale is interesting, since it indicates some academic interest is present in the Indian group.

In general, it appears that the two groups are similar in terms of interests and motivation, but the Indian females lack the significant values and academic behaviors which would allow successful goal attainment.

Correlation matrices for non-Indians and Indians are given in Appendices R and S, respectively. For the grade seven non-Indians, vocational aspiration correlates positively (.05) only with two of the academic behavior scales. Actual self correlates positively with three of the academic behavior scales and one of the achievement motivation scales, as well as with the ideal self scale. Ideal self correlates positively only with actual self. For the Indians, vocational aspiration correlates significantly with none of the scales, actual self correlates with one academic behavior scale, while ideal self correlates negatively (.05) with one of the achievement motivation scales.

The results of the Indian females are puzzling. It appears that actual and ideal self, significant aspects of personality, are unrelated to one another. Apparently, the Indian girls are a great distance from where they would like to be. Their culture apparently inculcates interests which are relationship oriented and require considerable education, as evidenced by the achievement value orientation scale, but the same cultural factors seem to discourage internalization of achievement motives, as evidenced by the negative correlation (.01) of the Rosen scale with one of the achievement motivation scales. In the main, the Indian females seem to be an anomalous group.

Summaries of the regression analyses of the grade seven non-Indian and Indian females are given in Appendices T and V, respectively. For the non-Indians, vocational aspiration has no predictors, while actual self and ideal self predict only each other. The Indian females, on the other hand, reveal that the dependent variables, as well as most other variables, are predicted by many. Vocational aspiration is predicted best by scientific and technical interests, followed by ideal self (- correlation), humane (- correlation), achievement motivation, and outdoor (- correlation). Multiple R is .64. Actual self is predicted by two academic behavior scales (one of which has a - correlation), and outdoor interest, to give a Multiple R of .69. Ideal self is predicted equally well by the two achievement motivation scales (both correlate negatively with ideal), followed by vocational aspiration (- correlation), age (- correlation), one academic behavior scale (- correlation), and humane, to give a Multiple R of .75. The non-Indian females, on the one hand, seem to be characterized by a moderately integrated self-image, while the Indian females, on the other hand, seem to be characterized by a diffused self-image, or role diffusion. The regression analysis supports the earlier conclusion that the Indian females are an anomalous group.

C. Grade Seven: Males.

Means, standard deviations, and differences are reported in Table VII. Of the 18 variables, 9 variables are significantly different at the  $p = \leq .05$ . The Indian males score significantly lower on three of the academic behavior scales, ideal self, scientific interest, and one of the achievement motivation scales, while the non-Indians score significantly lower on service and humane interests. These kinds of interests, service and humane, seem to be consistent for the Indian samples and reflect, in all probability, their cultural background. Correlation matrices for the non-Indian and Indian males are found in Appendices V and W, respectively. For the non-Indians, vocational aspiration correlates positively (.05) with three measures of academic behavior, scientific interest, and both measures of achievement motivation and correlates negatively (.05) with outdoor and service interests. Actual self correlates positively with all academic behavior scales and both achievement motivation scales. Ideal self correlates positively (.05) with one academic behavior scale and scientific interest. It appears that the achievement ethic has been strongly internalized by the non-Indian males. Among the Indian males, vocational aspiration does not correlate significantly with any scales, while actual self correlates negatively (.05) with economic interest. Ideal self has no significant correlations. The lack of more significant correlations in the Indian male sample is a function of sample size. A close inspection of Appendices V and W indicates that there is, however, a closer correspondence of magnitude and direction of correlations between Indian and non-Indian males than is the case for Indian and non-Indian females (Appendices R and S). This supports the conclusion of greater convergence between the male samples than between the female samples.



TABLE VII

## MEANS AND STANDARD DEVIATIONS FOR GRADE SEVEN MALES

Variables	Non-Indians (N = 116)		Indians (N=21)		Significance of Difference Between Means
	Mean	S.D.	Mean	S.D.	
Age	12.54	0.76	13.76	1.09	.0001
Work Methods	20.56	10.07	16.76	7.13	.02
Delay Avoidance	21.65	9.22	17.19	9.08	.02
Teacher Approval	21.90	11.42	18.05	10.28	.06
Education Acceptance	23.14	9.54	19.24	9.30	.04
Vocational Aspiration	50.72	6.42	50.38	6.19	.42
Actual Self	64.12	10.18	64.29	10.81	.47
Ideal Self	77.89	6.95	71.19	14.15	.02
Economic	12.72	4.79	12.62	2.64	.44
Technical	19.03	5.17	18.29	4.71	.27
Outdoor	18.85	4.52	17.48	4.84	.11
Service	14.23	4.49	16.57	4.23	.009
Humane	12.03	5.22	14.33	4.65	.02
Artistic	11.41	5.14	12.57	4.87	.15
Scientific	14.71	4.66	12.67	3.26	.009
Aberdeen	15.70	4.40	13.86	3.76	.03
Rosen	5.91	2.10	5.62	2.20	.28
Buxton	10.89	3.87	10.52	2.98	.30

Summaries of the stepwise regression analyses for non-Indian and Indian males are given in Appendices X and Y, respectively. For the non-Indians, vocational aspiration is predicted best by one of the achievement motivation scales ( $MR = .34$ ), as is the case of actual self ( $MR = .41$ ), while the ideal self is predicted best by actual self ( $MR = .22$ ). The regression analysis supports the notion of the achievement orientation of non-Indian males. The small size of the Indian male sample makes, however, the interpretation of the regression analysis tenuous. The predictor variables which do emerge, though, have a moderate correspondence to those which emerged in the regression analysis of the non-Indian males, which supports the earlier contention of moderate convergence between the male samples.

#### D. Semantic Differential.

Some additional data were gathered by means of the semantic differential which, in the main, are not included because of the length and complexity of the analysis involved. The semantic differential is a heuristic instrument for the measurement of evaluative meaning or attitude. It has proved to be a valuable tool in cross-cultural studies.

To gain some idea of which might be obtained in the way of results, a random sample of 139 Indians and non-Indians from grades 7-9 were selected and analyzed. The correlation matrix of the concepts is given in Appendix Z. Interestingly enough, very high intercorrelations were obtained among the first five concepts. When this matrix was factor analyzed (Appendix AA), these five concepts defined Factor I of the rotated factors, suggesting some kind of cultural--authority--identity factor. Factor II loads on ideal self, friend, father, and ideal friend, indicating some other kind of identity or self-image factor. Factor III loads on money and negatively on enemy, school,

and teacher, indicating some kind of rejection factor. Further investigation of these data could well produce some highly significant results.

#### Discussion and Conclusions.

This study is concerned with the self-image of Indians and non-Indians as it relates to the following:

- (1) perceived level of vocational aspiration;
- (2) perceived actual self;
- (3) perceived ideal self; and
- (4) the degree to which these perceived aspects of self-image are supported by motives and behaviors which will enhance the probability of success or accomplishment.

Various scales were administered to students in grades seven to nine. Analysis concentrated on grade seven groups since the sample sizes were sufficiently large enough for statistical treatment. Comparisons were made between the total Indian and non-Indian groups, between Indian and non-Indian females, and between Indian and non-Indian males.

For the total samples, no significant differences were found between perceived level of vocational aspiration and perceived actual self-concept. A significant difference was found between the two groups with reference to ideal self-concept, with the non-Indian group scoring higher. The variability of the Indian group, however, was considerably higher. The results of the ideal self scale can be interpreted in two ways: either the Indians are more satisfied with themselves and see less reason for changing or they may be resigned to the situation as it is. The wide variability on the scores, from

essentially no discrepancies between actual and ideal to discrepancies matching those of the non-Indian group, does indicate that there are some who are dissatisfied with themselves as they are. As groups, though, both the Indians and non-Indians perceive their possibilities in much the same ways. These aspects of self-image have a high degree of congruence.

With respect to the academic behaviors necessary to support these aspirations, the non-Indians score significantly higher than the Indians. The same holds, in the main, for the internalization of the support motives and values associated with achievement which make attainment much more probable. The results of the interest scales are more varied. Although the two groups emphasized different interests, the non-Indians preferred vocations which require specialized training or additional post-high school education. Since this group also has the requisite support behaviors and motives, attainment is feasible for this group. The Indians, on the other hand, also emphasized vocational interests which require specialized training or education, but the absence of the significant support behaviors makes attainment of these goals doubtful. These conclusions are reinforced when one inspects the correlations of the support variables with vocational aspiration and ideal self.

When the grade seven groups are divided into males and females, approximate results are obtained. The major conclusion seems to be that the Indian males are more congruent with the non-Indian males than are the Indian females with the non-Indian females. The Indian females appear to exhibit more conflict than do the male counterparts.

Tables VIII and IX are included to provide a comprehensive view of the results. What has been presented cannot be supported on a statistical basis, but the contents aid in interpreting the results. It was felt that this justifies the statistical deviation. What has been done in these Tables is to present the average correlations of the four academic behavior scales (Table VIII) and the average correlations of the two achievement motivation scales (Table IX) with four significant variables: vocational aspiration, actual self, ideal self, cultural orientation.

Both Tables present interesting results. In Table VIII, it can be readily seen that all grade seven groups perceive themselves to possess the academic support behaviors to the same extent. In this regard, all students consider themselves to be equally academically oriented. With regard to ideal self, the Indian males aspire minimally to an academic orientation while the Indian females reject this aspect of self-image rather strongly. As for vocational aspiration, this is strongly associated with academic orientation in the non-Indians, but only minimally associated in the Indians. For achievement ethic orientation, the averages are in the same direction for all groups, but the Indian females appear to be more oriented in this way than do the Indian males.

In Table IX, actual self seems to be associated with achievement motivation to the same extent across all groups. Apparently all students perceive themselves to be motivated to achieve to the same degree. As for ideal self, there seems to be minimal association with achievement motivation across all groups. The cultural bias is also operative in achievement motivation. It appears that the Indian culture does not support this motive, while the opposite is the case in the non-Indian students.

TABLE VIII

AVERAGE CORRELATION OF SELECTED VARIABLES  
WITH THE FOUR ACADEMIC BEHAVIOR SCALES FOR GRADE SEVEN SAMPLES

Variable	Non- Indian TOTAL	Indian TOTAL	Non- Indian FEMALES	Indian FEMALES	Non- Indian MALES	Indian MALES
Vocational Aspiration	.20	.04	.16	.06	.23	.04
Actual Self	.26	.24	.22	.25	.31	.23
Ideal Self	.10	-.05	.12	-.17	.11	.03
Cultural Orientation	.26	.10	.23	.15	.26	.04



TABLE IX

AVERAGE CORRELATION OF SELECTED VARIABLES  
WITH THE TWO ACHIEVEMENT MOTIVATION SCALES FOR GRADE SEVEN SAMPLES

Variable	Non- Indian TOTAL	Indian TOTAL	Non- Indian FEMALES	Indian FEMALES	Non- Indian MALES	Indian MALES
Vocational Aspiration	.13	.06	.05	.05	.10	.03
Actual Self	.13	.13	.10	.13	.16	.14
Ideal Self	.01	.01	.03	-.05	.01	.06
Cultural Orientation	.17	-.12	.13	-.26	.19	-.22

In general, it appears that the cultural basis of the Indian students has differential effects upon the males and females. Although the Indian students appear to reject the achievement ethic, which stresses the possibility and necessity of improving status, of planning to insure future gains, and acquiring independence of family ties, they do appear to have accepted the value of an academic orientation. Their self-concept ratings lead to the conclusion that the Indians perceive themselves as having learned academic behaviors and achievement motives to about the same extent as their non-Indian peers. In terms of what they would like to be, this kind of orientation seems to be rejected by the Indian females and tolerated or minimally accepted by the males. In addition, while their perceived level of aspiration is comparable to those of the non-Indians, it does not appear to be supported by the necessary behaviors and motives, as is the case of the non-Indian students. The evidence suggests that the Indians accept some aspects of education while rejecting others, with this trend more pronounced among the Indian females.

#### Implications

The results lead one to conclude that there are a number of possibilities for further consideration:

(1) Motivation by itself is a necessary but not sufficient requirement for success. It would seem logical that a necessary subsequent step would be a secondary analysis of the data, particularly of Dr. W. R. Unruh's data combined with these data. This would allow one to analyze the convergence and divergence between basic skills and abilities and motivation, values, and

self-image. The results of this analysis would allow one to isolate those people who would benefit most from programmed intervention. The following implication deals more specifically with this problem.

(2) It is obvious from the data that there are those Indian students who exhibit little, if any, difference from their corresponding peers. It would seem that now the focus of study and concentration should be upon intra-Indian analysis. By now it is established that Indian and non-Indian differences do exist and the information is extensive enough to indicate the areas in which these differences exist. Consequently, it would seem reasonable to isolate those Indian students who approximate the characteristics of non-Indians from those who are highly deficient in the same areas and study the patterns of convergence in both groups. This would probably, in addition, require more intensive testing of individual Indian students to determine areas of competence and weakness. This would allow for the development of individualized programmed intervention which would remediate or develop the behaviors of the low group and enrich or enhance the high group which approximates the characteristics of the non-Indians. It is this author's contention that it would be inadvisable to continue to treat the Indians as a group. The high variability found in core characteristics would suggest that differential considerations are indicated.

(3) It is apparent that the Indian males are coping more adequately with educational demands than are the Indian females. There are undoubtedly many reasons for this. It would appear, though, that greater concentration, individualized programmes, and engineered socialization through group approaches are indicated. This undoubtedly applies to both males and females; this, however, seems to be more applicable to the females since there are indications

that they consider themselves undervalued and hence might be receiving less concern and consideration in their educational achievement. The data indicate that the females are a more dissonant group. This requires further consideration.

(4) The data indicate that these Indians are not too dissimilar in their aspirations from those of the non-Indians. Their support behaviors, however, are inadequate for the demands of these aspirations. It would seem feasible to investigate the reinforcement contingencies that would aid in the development of motives and academic behaviors which would facilitate attainment of these goals. This would require some kind of developmental approach. Since the interests of the Indians and non-Indians are relatively convergent, it would appear that, in addition to development of skills and abilities, intensive group approaches and counseling would be beneficial. The implications of these are indicated below.

(5) It is apparent that the Indian students do have some degree of educational orientation or acceptance. It also seems likely that these motives will not continue to develop over time. Consequently, it would appear that an intensive individual and group counseling intervention programme, integrated with the individual's programme, could be beneficial. This would include not only vocational counseling, but emphasis on personal, social, and academic development. Such integration should not be limited to the classroom or school.

(6) The deficiencies of the Indians seem to have strong cultural basis. It would seem reasonable, then, to conclude that much greater attention to the social climate and organization of the school should be paid in order to develop the necessary attitudes, values, motives, and behaviors necessary for success. Generally, this would involve an individual approach to learning, including such things already mentioned as analysis of abilities and characteristics, individual remediation, programmed instruction, non-graded sequencing, individual

and group counseling, team approaches, and integration of interests with school programmes and wider social concerns.

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APPENDEXES

FOR

PART V

## APPENDIX A

THE SURVEY OF STUDY HABITS  
AND ATTITUDES (SSHA)

Non-intellective factors are an important source of differences between academically successful and unsuccessful students. The SSHA was devised to measure four relatively independent traits that are important in academic achievement but are not appreciably related to scholastic ability. The SSHA reflects differences in motivation for studying, beliefs about education, and efficiency of study methods. Specifically, the SSHA subscales provide the following measures:

1. Work Methods: use of effective study procedures, skill and efficiency in doing academic assignments.
2. Delay Avoidance: promptness in completing assignments and ability to resist distractions.
3. Teacher Approval: feelings and opinions about teachers, their classroom behavior, and their methods.
4. Education Acceptance: approval of educational objectives, practices and requirements.

Scales 1 and 2 can be combined to give a score on Study Habits, a measure of academic behavior. Scales 3 and 4 can be combined to give a score on Study Attitudes, a measure of scholastic attitudes and beliefs. A total score from all four subscales can be obtained which is referred to as Study Orientation, an overall measure of study habits and attitudes (Brown & Holtzman, 1966).

**FORM H**

GRADES 7-12

**SSHA****Survey of Study Habits and Attitudes****Brown—Holtzman**

Do not open this booklet until you are told to  
do so. Wait for the examiner's instructions.

**DO NOT MAKE ANY MARKS IN THIS BOOKLET**

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## DIRECTIONS

The purpose of this survey is to examine your study habits and attitudes in order to help you improve your study skills. If you will honestly and thoughtfully mark all of the statements on the pages that follow, you will be able to learn many of your study faults. Your answers will be treated with the strictest confidence, so please answer exactly the way you feel.

You will mark your answers on a separate answer sheet. Make no marks on this booklet. There are 100 statements to be answered. Decide how you feel about each statement and mark your answer on your answer sheet. Choose one of the five possible answers: *rarely*, *sometimes*, *frequently*, *generally*, or *almost always*.

For example, if you feel that the statement is *rarely* true for you, blacken the space under **R** on the answer sheet. In marking your answers, be sure that the number of the statement agrees with the number on the answer sheet. Make sure that your marks are heavy and black. Make no stray marks on the answer sheet and erase completely any mark that you wish to change.

Following is an explanation of the terms used for answers to the statements:

- R – RARELY** means from 0 to 15 per cent of the time.
- S – SOMETIMES** means from 16 to 35 per cent of the time.
- F – FREQUENTLY** means from 36 to 65 per cent of the time.
- G – GENERALLY** means from 66 to 85 per cent of the time.
- A – ALMOST ALWAYS** means from 86 to 100 per cent of the time.

Remember, you are asked to rate yourself not as you think you *should* do or feel, or as you think *others* might do or feel, but as you yourself are in the habit of doing and feeling. When you cannot answer a statement on the basis of actual experience, mark the statement according to what you would be most likely to do if the situation should arise.

There are no “right” or “wrong” answers to these statements, and there is no time limit for completing the survey. Work as quickly as you can without being careless, and do not spend too much time on any one statement. Please do not omit any of the statements.

R—RARELY

S—SOMETIMES

F—FREQUENTLY

G—GENERALLY

A—ALMOST ALWAYS

1. When my assigned homework is extra long or unusually hard, I either quit or study only the easier parts of the lesson.
2. In preparing reports, themes, and other written work, I make certain that I clearly understand what is wanted before I begin work.
3. I feel that teachers don't understand the needs and interests of students.
4. My dislike for certain teachers causes me to neglect my school work.
5. If I have to be absent from class, I make up missed lessons without being reminded by the teacher.
6. I have trouble saying what I want to say on tests, reports, and other work to be turned in.
7. My teachers make their subjects interesting and meaningful to me.
8. I feel that I would study harder if I were given more freedom to choose subjects that I like.
9. Daydreaming distracts my attention from my lessons while I am studying.
10. My teachers criticize my written work for being poorly planned or hurriedly written.
11. I feel that teachers allow their likes or dislikes for students to influence their grading too much.
12. Even though I don't like a subject, I still work hard to make a good grade.
13. Even though an assignment is dull and boring, I stick to it until it is completed.
14. I give special attention to neatness on themes, reports, and other work to be turned in.
15. I believe that the easiest way to get good grades is to agree with everything the teachers say.
16. I lose interest in my studies after the first few days of school.
17. I keep all my work for each subject together and carefully arranged in some planned order.
18. I memorize spelling rules, definitions of words, rules of grammar, etc., without really understanding them.
19. I think that teachers like to show who's boss too much.
20. I believe that teachers really want their students to like them.
21. When I am having trouble with my school work, I try to talk it over with the teacher.
22. I hesitate to ask a teacher for further explanation of an assignment that is not clear to me.
23. I feel that teachers are too narrow-minded and set in their ways.
24. I feel that students are not given enough freedom in selecting their own topics for themes and reports.
25. I do not bother to correct errors on the papers my teachers have graded and returned to me.
26. I get nervous and confused when taking a test and fail to answer questions as well as I otherwise could.
27. I think that teachers expect students to do too much studying outside of class.
28. Lack of interest in my school work makes it hard for me to keep my attention on my reading assignments.
29. My place of study at home is kept neat and businesslike.
30. I have trouble with spelling, grammar, and punctuation while writing themes and reports.
31. When explaining a lesson or answering questions, my teachers use words that I do not understand.
32. Unless I really like a subject, I believe in doing only enough to get a passing grade.
33. Interruptions disturb my studies when I am studying at home.
34. In taking notes, I tend to write down things which later turn out to be unimportant.

GO ON TO NEXT PAGE.



**R—RARELY****S—SOMETIMES****F—FREQUENTLY****G—GENERALLY****A—ALMOST ALWAYS**

35. My teachers fail to give enough explanation of the things they are trying to teach.
36. I feel confused and undecided as to what I want to study in school and what I want to do after I get out of school.
37. It takes a long time for me to get warmed up to the job of studying.
38. I do poorly on tests because I find it hard to think clearly and plan my work within a short period of time.
39. I feel that teachers are too strict and know-it-all in dealing with students.
40. Some of my school work is so uninteresting that I have to make myself do the assignments.
41. I am unable to study well because I get restless, moody, or have the blues.
42. I skip over the figures, graphs, and tables in a reading assignment.
43. I believe that teachers secretly enjoy giving their students a "hard time."
44. I believe that having a good time and getting one's full share of fun out of life is more important than studying.
45. I put off doing written assignments until the last minute.
46. After reading several pages of an assignment, I am unable to remember what I have just read.
47. I think that teachers tend to talk too much.
48. I believe that teachers tend to avoid discussing present-day problems and events with their classes.
49. When I sit down to study I find myself too tired, bored, or sleepy to study well.
50. I find it hard to pick out the important points of a reading assignment—points that later appear on tests.
51. I feel that teachers try to give the same amount of attention and help to all their students.

52. I feel that my grades show about what I can really do.
53. I waste too much time talking, watching TV, listening to the radio, going to the movies, etc., for the good of my studies.
54. When in doubt about the proper form for a written assignment, I find a model or guide to follow.
55. The illustrations, examples, and explanations given by my teachers are dull and hard to understand.
56. I feel that it is not worth the time, money, and effort that one must spend to get a college education.
57. My studying at home is done in an easy-going, unplanned manner.
58. When reading a long assignment, I stop now and then to try to remember what I have read.
59. I feel that teachers tend to look down upon their poorer students and make fun of their mistakes.
60. Some of my classes are so boring that I spend the class period drawing pictures, writing notes, or daydreaming instead of listening to the teacher.
61. Having too many other things to do causes me to get behind in my school work.
62. I seem to get very little done for the amount of time I spend studying.
63. I feel that teachers make their subjects too hard for the average student.
64. I feel that I am taking subjects which will do me little good.
65. I try to do my assignments at school so as to reduce my homework.
66. I can study a reading assignment for only a short while before the words stop making sense.
67. I think that football coaches do more for school life than do the teachers.
68. I believe that the main job of the schools is to teach students things that will help them earn a living.

**GO ON TO NEXT PAGE.**

**R—RARELY      S—SOMETIMES      F—FREQUENTLY      G—GENERALLY      A—ALMOST ALWAYS**

69. Problems outside of school—with other students or at home—cause me to neglect my school work.
70. I copy the diagrams, drawings, tables, and other illustrations that the teacher puts on the black-board.
71. I feel that teachers think more about grades than they do about the real purpose of schools.
72. I try to become really interested in every subject I take.
73. I complete my homework assignments on time.
74. I lose points on tests because I change my first answer only to discover later that I was right the first time.
75. I think that students who ask questions and take part in class discussion are only trying to “get in good” with the teacher.
76. I feel that the main reason for going to college is to be admired and envied by others.
77. I like to have a radio, record player, or television set turned on while I’m studying.
78. When getting ready for a test I arrange facts to be learned in some planned order—order of importance, order in which taught, order of time in history, etc.
79. I believe that teachers deliberately give tests on the days following parties and ball games.
80. I believe that having a winning football team is just as important as learning history or math.
81. With me, studying is sort of hit-or-miss depending on the mood I’m in.
82. I am careless about spelling, punctuation, and grammar when answering test questions.
83. I believe that one way to get good grades is by using flattery on your teachers.
84. I think that it might be best for me to drop out of school and get a job.
85. I study an hour or more each day outside of school.
86. Although I work until the last possible minute, I am unable to finish tests within the time allowed.
87. I feel that it is almost impossible for the average student to do all of his assigned homework.
88. I feel that the things taught in school do not help one to meet adult problems.
89. I keep my assignments up to date by doing my work regularly from day to day.
90. If time is left, I take a few minutes to check over my answers before turning in my test paper.
91. I feel that the ridiculous assignments made by teachers are the main reason for student cheating.
92. Too much reading or studying gives me a headache.
93. I prefer to study my lessons alone rather than with others.
94. When tests are returned, I find that my grade has been lowered by careless mistakes.
95. I feel that students cannot be expected to like most teachers.
96. I feel like skipping school whenever there is something I’d rather do.
97. At the beginning of a study period I plan my work so that I will make best use of my time.
98. During tests I forget names, dates, formulas, and other details that I really do know.
99. I believe that teachers go into teaching mainly because they enjoy it.
100. I believe that higher grades are given to students who can memorize facts than to those who “think” things through.

## APPENDIX B

OCCUPATIONAL SCALE

This scale was constructed to provide a measure of the level of occupational aspiration. The scale is composed of 15 triads of occupations, each selected from the index for occupations in Canada (Blishen, 1966; Pineo and Porter, 1967). In each triad the subject selects the occupation that is most attractive to him. Each choice is then assigned the value according to the index for occupations in Canada and an average value for the scale is then obtained.

Occupational Scale

Listed below are groups of jobs. For each group of three, check the one that you would most like to be.

For example: If you would like to be a student most, check in the following way:

Student ✓ Teacher \_\_\_\_\_ Principal \_\_\_\_\_

1. Hunter \_\_\_\_\_ Sales clerk in store \_\_\_\_\_ Dentist \_\_\_\_\_
2. University professor \_\_\_\_\_ Musician \_\_\_\_\_ Postmaster \_\_\_\_\_
3. Shoemaker \_\_\_\_\_ Logger \_\_\_\_\_ Bus Driver \_\_\_\_\_
4. Office manager \_\_\_\_\_ Cashier in store \_\_\_\_\_ Typist \_\_\_\_\_
5. Telephone operator \_\_\_\_\_ Cook \_\_\_\_\_ Truck driver \_\_\_\_\_
6. Baker \_\_\_\_\_ Judge \_\_\_\_\_ Artist \_\_\_\_\_
7. School teacher \_\_\_\_\_ Carpenter \_\_\_\_\_ Doctor \_\_\_\_\_
8. Photographer \_\_\_\_\_ Librarian \_\_\_\_\_ Hotel Owner \_\_\_\_\_
9. T.V. Star \_\_\_\_\_ Bank Manager \_\_\_\_\_ Owner of a food store \_\_\_\_\_
10. Writer \_\_\_\_\_ Lawyer \_\_\_\_\_ Auctioneer \_\_\_\_\_
11. Cattle rancher \_\_\_\_\_ Farm Hand \_\_\_\_\_ Mayor of a town \_\_\_\_\_
12. Eye doctor \_\_\_\_\_ Nurse \_\_\_\_\_ First Aid Attendant \_\_\_\_\_
13. Butcher \_\_\_\_\_ Fruit packer in a cannery \_\_\_\_\_ Scientist \_\_\_\_\_
14. Forest Ranger \_\_\_\_\_ Waiter \_\_\_\_\_ Radio Announcer \_\_\_\_\_
15. Minister or Priest \_\_\_\_\_ T.V. and Radio Repairman \_\_\_\_\_ Railroad worker \_\_\_\_\_

## APPENDIX C

SELF-CONCEPT SCALE

A self-concept is a person's view of himself, the most complete picture that an individual has of himself at any particular time. Many psychologists maintain that an individual's perception of himself may well be the central factor influencing his behavior.

There are many ways of studying pupils' self-perceptions. One useful way is this scale developed by Bledsoe and Garrison (1962). In this scale, 25 of the adjectives indicate positive qualities; 5 are considered negative. Pupils rate themselves on each of the 30 adjectives and then check each again to show the way they would like to be. The form is scored as follows: for the 25 positive adjectives, a weight of 3 is given for "nearly always," 2 for "about half the time," and 1 for "just now and then." These values are reversed for the 5 negative adjectives. The weighted ratings for each part of the scale are then totalled to obtain two values, each corresponding to the two parts of the scale.

## SELF-CONCEPT SCALE

Each of us needs to know more about what we are like. This form is to help you describe yourself and to describe how you would like to be. There are no right or wrong answers; each person may have different ideas. Answer these according to your feelings. It is important for you to give your own honest answers.

Think carefully and check the answer that tells if you are like the word says nearly always, about half the time, or just now and then. In the second column check the answer if you would like to be like the word says nearly always, about half the time, or just now and then.

THIS IS THE WAY I AM

THIS IS THE WAY I'D LIKE TO BE

<u>nearly always</u>	<u>about half the time</u>	<u>just now and then</u>		<u>nearly always</u>	<u>about half the time</u>	<u>just now and then</u>
_____	_____	_____	Friendly	_____	_____	_____
_____	_____	_____	Obedient	_____	_____	_____
_____	_____	_____	Honest	_____	_____	_____
_____	_____	_____	Thoughtful	_____	_____	_____
_____	_____	_____	Brave	_____	_____	_____
_____	_____	_____	Careful	_____	_____	_____
_____	_____	_____	Fair	_____	_____	_____
_____	_____	_____	Mean	_____	_____	_____
_____	_____	_____	Lazy	_____	_____	_____
_____	_____	_____	Truthful	_____	_____	_____
_____	_____	_____	Smart	_____	_____	_____
_____	_____	_____	Polite	_____	_____	_____
_____	_____	_____	Clean	_____	_____	_____
_____	_____	_____	Kind	_____	_____	_____
_____	_____	_____	Selfish	_____	_____	_____
_____	_____	_____	Helpful	_____	_____	_____
_____	_____	_____	Good	_____	_____	_____
_____	_____	_____	Cooperative	_____	_____	_____
_____	_____	_____	Cheerful	_____	_____	_____
_____	_____	_____	Jealous	_____	_____	_____
_____	_____	_____	Sincere	_____	_____	_____
_____	_____	_____	Studious	_____	_____	_____
_____	_____	_____	Loyal	_____	_____	_____
_____	_____	_____	Likeable	_____	_____	_____
_____	_____	_____	A good sport	_____	_____	_____
_____	_____	_____	Useful	_____	_____	_____
_____	_____	_____	Dependable	_____	_____	_____
_____	_____	_____	Bashful	_____	_____	_____
_____	_____	_____	Happy	_____	_____	_____
_____	_____	_____	Popular	_____	_____	_____



## APPENDIX D

SAFRAN VOCATIONAL INTEREST TEST

This test was derived by Dr. C. Safran for counseling use in the Calgary school system to provide a simple measure of vocational interest. The scale provides measures of interest in seven areas:

1. Economic            indicating a desire to work in some area related to the business world.
2. Technical           indicating a preference to work with machines and tools.
3. Outdoor            indicating a preference for work that keeps one outdoors.
4. Service             indicating a desire to assist people in some service area
5. Humane             indicating a preference for helping people (professional).
6. Artistic            indicating a desire for creative work.
7. Scientific          indicating a preference for scientific work.

# SAFRAN VOCATIONAL INTEREST TEST

C. Safran

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## TO THE STUDENT

(Please read carefully)

On the attached sheets are pairs of statements. You are to choose one statement in each pair that you are more interested in and darken the circle opposite the statement. There may be a pair you are not interested in at all. Nevertheless, you must choose one over the other, the one you are more interested in. When Page 1 is completed, total the darkened circles in each column and place the totals in the spaces provided at the bottom of the page. Do this for each page.

At the bottom of Page 5 you will notice spaces for grand totals. Total the column 1's for Pages 1, 2, 3, 4, and 5 and enter the total in the grand total, column 1, on Page 5. Repeat the process for the remaining six grand totals, using columns 2, 3, etc. Record these grand totals on the attached profile sheet and graph them.

### Explanation

- E** stands for Economic interest, indicating a desire to work in some area related to the business world, secretary, stenographer, banking.
- T** stands for Technical interest, indicating a preference to work with machines and tools.
- O** stands for Outdoor interest, indicating that you prefer work that keeps you outdoors and deals with farming, animal husbandry, geology, botanist, veterinarian, horticulturist.
- Ser.** stands for Service interest, which indicates a desire to assist people in some service area such as police work, hotel work, army, cook, beautician, stewardess.
- H** stands for Humane interest, which shows a preference for helping people in the type of work done by a doctor, dentist, teacher, social worker and nurse.
- A** stands for Artistic interest, indicating a desire for creative work such as painting, writing, designing, dancing, interior decorating.
- Sc.** stands for Scientific interest, showing a preference for scientific work such as chemistry, physics, engineering, psychologist, dietitian, biologist.

Should you have difficulty in understanding these directions, discuss it with your counsellor or teacher.

# “S” INTEREST SCALE

	1	2	3	4	5	6	7
Keeping a record of business transactions.	<input type="radio"/>						
Keeping train equipment repaired.		<input type="radio"/>					
Raising and harvesting crops.			<input type="radio"/>				
Acting as a law enforcement officer.				<input type="radio"/>			
Teaching children a variety of subjects.					<input type="radio"/>		
Writing literary novels.						<input type="radio"/>	
Keeping train equipment repaired.		<input type="radio"/>					
Acting as a law enforcement officer.				<input type="radio"/>			
Keeping a record of business transactions.	<input type="radio"/>				<input type="radio"/>		
Teaching children a variety of subjects.							
Raising and harvesting crops.			<input type="radio"/>				
Writing literary novels.						<input type="radio"/>	
Acting as a law enforcement officer.				<input type="radio"/>			
Directing the engineering on construction jobs.							<input type="radio"/>
Keeping train equipment repaired.		<input type="radio"/>					
Writing literary novels.						<input type="radio"/>	
Keeping a record of business transactions.	<input type="radio"/>						<input type="radio"/>
Directing the engineering on construction jobs.							
Teaching children a variety of subjects.					<input type="radio"/>		
Keeping train equipment repaired.		<input type="radio"/>					
Writing literary novels.				<input type="radio"/>		<input type="radio"/>	
Acting as a law enforcement officer.							<input type="radio"/>
Directing the engineering on construction jobs.					<input type="radio"/>		
Teaching children a variety of subjects.							
Acting as a law enforcement officer.				<input type="radio"/>			
Keeping a record of business transactions.	<input type="radio"/>						
Directing the engineering on construction jobs.							<input type="radio"/>
Raising and harvesting crops.			<input type="radio"/>				
Writing literary novels.						<input type="radio"/>	
Keeping a record of business transactions.	<input type="radio"/>						
Raising and harvesting crops.			<input type="radio"/>				
Keeping train equipment repaired.		<input type="radio"/>					
Directing the engineering on construction jobs.							<input type="radio"/>
Writing literary novels.						<input type="radio"/>	
Raising and harvesting crops.			<input type="radio"/>				
Keeping a record of business transactions.	<input type="radio"/>						
Teaching children a variety of subjects.					<input type="radio"/>		
Acting as a law enforcement officer.				<input type="radio"/>			
Directing the engineering on construction jobs.							<input type="radio"/>
Keeping train equipment repaired.		<input type="radio"/>					
Teaching children a variety of subjects.					<input type="radio"/>		
Raising and harvesting crops.			<input type="radio"/>				
TOTAL							

# "S" INTEREST SCALE

	1	2	3	4	5	6	7
Taking dictation in a business office. Inspecting and repairing car motors.	<input type="radio"/>	<input type="radio"/>					
Studying plant and animal life. Making airline passengers comfortable.			<input type="radio"/>	<input type="radio"/>			
Prescribing medical treatment for patients. Composing music and conducting orchestras.					<input type="radio"/>	<input type="radio"/>	
Inspecting and repairing car motors. Making airline passengers comfortable.		<input type="radio"/>		<input type="radio"/>			
Taking dictation in a business office. Prescribing medical treatment for patients.	<input type="radio"/>				<input type="radio"/>		
Studying plant and animal life. Composing music and conducting orchestras.			<input type="radio"/>			<input type="radio"/>	
Making airline passengers comfortable. Dispensing drugs and prescriptions.				<input type="radio"/>			<input type="radio"/>
Inspecting and repairing car motors. Composing music and conducting orchestras.		<input type="radio"/>				<input type="radio"/>	
Taking dictation in a business office. Dispensing drugs and prescriptions.	<input type="radio"/>						<input type="radio"/>
Prescribing medical treatment for patients. Inspecting and repairing car motors.		<input type="radio"/>			<input type="radio"/>		
Composing music and conducting orchestras. Making airline passengers comfortable.				<input type="radio"/>		<input type="radio"/>	
Dispensing drugs and prescriptions. Prescribing medical treatment for patients.					<input type="radio"/>		<input type="radio"/>
Making airline passengers comfortable. Taking dictation in a business office.	<input type="radio"/>			<input type="radio"/>			
Dispensing drugs and prescriptions. Studying plant and animal life.			<input type="radio"/>				<input type="radio"/>
Composing music and conducting orchestras. Taking dictation in a business office.	<input type="radio"/>					<input type="radio"/>	
Studying plant and animal life. Inspecting and repairing car motors.		<input type="radio"/>	<input type="radio"/>				
Dispensing drugs and prescriptions. Composing music and conducting orchestras.						<input type="radio"/>	<input type="radio"/>
Studying plant and animal life. Taking dictation in a business office.	<input type="radio"/>		<input type="radio"/>				
Prescribing medical treatment for patients. Making airline passengers comfortable.				<input type="radio"/>	<input type="radio"/>		
Dispensing drugs and prescriptions. Inspecting and repairing car motors.		<input type="radio"/>					<input type="radio"/>
Prescribing medical treatment for patients. Studying plant and animal life.			<input type="radio"/>		<input type="radio"/>		
TOTAL							

# “S” INTEREST SCALE

	1	2	3	4	5	6	7
Selling merchandise to customers. Installing electrical wiring.	<input type="radio"/>	<input type="radio"/>					
Exploring the country for oil deposits. Operating a telephone switchboard.			<input type="radio"/>	<input type="radio"/>			
Extracting and filling teeth. Designing styles for new clothes.					<input type="radio"/>	<input type="radio"/>	
Installing electrical wiring. Operating a telephone switchboard.		<input type="radio"/>		<input type="radio"/>			
Selling merchandise to customers. Extracting and filling teeth.	<input type="radio"/>				<input type="radio"/>		
Exploring the country for oil deposits. Designing styles for new clothes.			<input type="radio"/>			<input type="radio"/>	
Operating a telephone switchboard. Performing chemical analysis.				<input type="radio"/>			<input type="radio"/>
Installing electrical wiring. Designing styles for new clothes.		<input type="radio"/>				<input type="radio"/>	
Selling merchandise to customers. Performing chemical analysis.	<input type="radio"/>						<input type="radio"/>
Extracting and filling teeth. Installing electrical wiring.		<input type="radio"/>			<input type="radio"/>		
Designing styles for new clothes. Operating a telephone switchboard.				<input type="radio"/>		<input type="radio"/>	
Performing chemical analysis. Extracting and filling teeth.					<input type="radio"/>		<input type="radio"/>
Operating a telephone switchboard. Selling merchandise to customers.	<input type="radio"/>			<input type="radio"/>			
Performing chemical analysis. Exploring the country for oil deposits.			<input type="radio"/>				<input type="radio"/>
Designing styles for new clothes. Selling merchandise to customers.	<input type="radio"/>					<input type="radio"/>	
Exploring the country for oil deposits. Installing electrical wiring.		<input type="radio"/>	<input type="radio"/>				
Performing chemical analysis. Designing styles for new clothes.						<input type="radio"/>	<input type="radio"/>
Exploring the country for oil deposits. Selling merchandise to customers.	<input type="radio"/>		<input type="radio"/>				
Extracting and filling teeth. Operating a telephone switchboard.				<input type="radio"/>	<input type="radio"/>		
Performing chemical analysis. Installing electrical wiring.		<input type="radio"/>					<input type="radio"/>
Extracting and filling teeth. Exploring the country for oil deposits.			<input type="radio"/>		<input type="radio"/>		
TOTAL							



# “S” INTEREST SCALE

	1	2	3	4	5	6	7
Maintaining clerical office files. Repairing and maintaining diesel engines.	<input type="radio"/>	<input type="radio"/>					
Testing dairy herds for T.B. Carrying on city fire fighting duties.			<input type="radio"/>	<input type="radio"/>			
Nursing the sick back to health. Painting artistic murals.					<input type="radio"/>	<input type="radio"/>	
Repairing and maintaining diesel engines. Carrying on city fire fighting duties.		<input type="radio"/>		<input type="radio"/>			
Maintaining clerical office files. Nursing the sick back to health.	<input type="radio"/>				<input type="radio"/>		
Testing dairy herds for T.B. Painting artistic murals.			<input type="radio"/>			<input type="radio"/>	
Carrying on city fire fighting duties. Preparing special diets for hospital patients.				<input type="radio"/>			<input type="radio"/>
Repairing and maintaining diesel engines. Painting artistic murals.		<input type="radio"/>				<input type="radio"/>	
Maintaining clerical office files. Preparing special diets for hospital patients.	<input type="radio"/>						<input type="radio"/>
Nursing the sick back to health. Repairing and maintaining diesel engines.		<input type="radio"/>			<input type="radio"/>		
Painting artistic murals. Carrying on city fire fighting duties.				<input type="radio"/>		<input type="radio"/>	
Preparing special diets for hospital patients. Nursing the sick back to health.					<input type="radio"/>		<input type="radio"/>
Carrying on city fire fighting duties. Maintaining clerical office files.	<input type="radio"/>			<input type="radio"/>			
Preparing special diets for hospital patients. Testing dairy herds for T.B.			<input type="radio"/>				<input type="radio"/>
Painting artistic murals. Maintaining clerical office files.	<input type="radio"/>					<input type="radio"/>	
Testing dairy herds for T.B. Repairing and maintaining diesel engines.		<input type="radio"/>	<input type="radio"/>				
Preparing special diets for hospital patients. Painting artistic murals.						<input type="radio"/>	<input type="radio"/>
Testing dairy herds for T.B. Maintaining clerical office files.	<input type="radio"/>		<input type="radio"/>				
Nursing the sick back to health. Carrying on city fire fighting duties.				<input type="radio"/>	<input type="radio"/>		
Preparing special diets for hospital patients. Repairing and maintaining diesel engines.		<input type="radio"/>					<input type="radio"/>
Nursing the sick back to health. Testing dairy herds for T.B.			<input type="radio"/>		<input type="radio"/>		
TOTAL							



# “S” INTEREST SCALE

	1	2	3	4	5	6	7
Directing the accounting system in a business office.	<input type="radio"/>						
Servicing and repairing aircraft.		<input type="radio"/>					
Fishing commercially with special gear.			<input type="radio"/>				
Being a permanent member of the armed forces.				<input type="radio"/>			
Engaging in child welfare work.					<input type="radio"/>		
Designing rings, brooches, and bracelets.						<input type="radio"/>	
Servicing and repairing aircraft.		<input type="radio"/>					
Being a permanent member of the armed forces.				<input type="radio"/>			
Directing the accounting system in a business office.	<input type="radio"/>						
Engaging in child welfare work.					<input type="radio"/>		
Fishing commercially with special gear.			<input type="radio"/>				
Designing rings, brooches, and bracelets.						<input type="radio"/>	
Being a permanent member of the armed forces.				<input type="radio"/>			
Conducting research into properties of light and heat.							<input type="radio"/>
Servicing and repairing aircraft.		<input type="radio"/>					
Designing rings, brooches, and bracelets.						<input type="radio"/>	
Directing the accounting system in a business office.	<input type="radio"/>						
Conducting research into properties of light and heat.							<input type="radio"/>
Engaging in child welfare work.					<input type="radio"/>		
Servicing and repairing aircraft.		<input type="radio"/>					
Designing rings, brooches, and bracelets.						<input type="radio"/>	
Being a permanent member of the armed forces.				<input type="radio"/>			
Conducting research into properties of light and heat.					<input type="radio"/>		<input type="radio"/>
Engaging in child welfare work.							
Being a permanent member of the armed forces.				<input type="radio"/>			
Directing the accounting system in a business office.	<input type="radio"/>						
Conducting research into properties of light and heat.							<input type="radio"/>
Fishing commercially with special gear.			<input type="radio"/>				
Designing rings, brooches, and bracelets.						<input type="radio"/>	
Directing the accounting system in a business office.	<input type="radio"/>						
Fishing commercially with special gear.			<input type="radio"/>				
Servicing and repairing aircraft.		<input type="radio"/>					
Conducting research into properties of light and heat.							<input type="radio"/>
Designing rings, brooches, and bracelets.						<input type="radio"/>	
Fishing commercially with special gear.			<input type="radio"/>				
Directing the accounting system in a business office.	<input type="radio"/>						
Engaging in child welfare work.					<input type="radio"/>		
Being a permanent member of the armed forces.				<input type="radio"/>			
Conducting research into properties of light and heat.							<input type="radio"/>
Servicing and repairing aircraft.		<input type="radio"/>					
Engaging in child welfare work.					<input type="radio"/>		
Fishing commercially with special gear.			<input type="radio"/>				
TOTAL							
GRAND TOTAL							

## FURTHER DIRECTIONS

1. Now record these grand totals on the attached profile sheet (Page 8) and graph them.
2. Proceed to the following section and answer the "Self-Rating Levels of Ability."

## SELF-RATING LEVELS OF ABILITY

### Academic Ability

Generally speaking pupils in the top quarter in academic ability have a better chance of entering a professional or managerial occupation, but there is considerable over-lapping which may take place. Academic ability alone does not decide what occupational level you will reach. High motivation and a great desire for a certain position coupled with hard work will help immeasurably.

If you took 100 people and divided them into four groups, where would you rate yourself academically?

The 1st group would be the top 25% of the people.

The 2nd group would be the next 25% of the people.

The 3rd group would be the next 25% of the people.

The 4th group would be the bottom 25% of the people.

Rating    1 ..... 1st group    3 ..... 3rd group  
              2 ..... 2nd group    4 ..... 4th group

### Mechanical Ability

Mechanical ability is also important in many jobs. Automobile mechanics, radio repairmen, engineers, etc., require a great deal of this ability. From your experience with mechanical things where would you rate yourself with other people your age?

Rating    1 ..... 1st group    3 ..... 3rd group  
              2 ..... 2nd group    4 ..... 4th group

### Social Ability

The ability to get along with people is often very important in many occupations. For example, teaching, salesmanship, welfare work, public relations, require a great deal of social ability. Where would you rate yourself in this ability compared to people of your own age?

Rating    1 ..... 1st group    3 ..... 3rd group  
              2 ..... 2nd group    4 ..... 4th group

### Clerical Ability

Many occupations require a great deal of clerical ability. This means the ability to keep reports neatly written and filed, having all your notes readily available and easy to find. Stenographers, clerks, commercial teachers, mathematicians, bookkeepers, and accountants, must have notes neatly written and filed. Where would you rate yourself in this ability compared to people your age?

Rating    1 ..... 1st group    3 ..... 3rd group  
              2 ..... 2nd group    4 ..... 4th group

Example	Academic	Mechanical	Social	Clerical
	3	1	2	3
	.....	.....	.....	.....

This person rates himself as in the 3rd group academically, in the first group mechanically, in the 2nd group socially, and in the 3rd group clerically.

**YOUR OWN RATING SCALE:** Please be honest in your evaluation.

Academic	Mechanical	Social	Clerical
.....	.....	.....	.....

**NOTE:** Record "Yaur Own Rating Scale" scores on the bottom of the Profile Sheet (Page 8).

# Safran Vocational Interest Test Profile

NAME: .....

SCHOOL: .....

GRADE: .....

SEX: M ..... F .....

	1	2	3	4	5	6	7
30							
29							
28							
27							
26							
25							
24							
23							
22							
21							
20							
19							
18							
17							
16							
15							
14							
13							
12							
11							
10							
9							
8							
7							
6							
5							
4							
3							
2							
1							
0							
	E	T	O	Ser.	H	A	Sc.
Raw Scores							
Percentiles							

Evaluation

ACADEMIC ☐MECHANICAL ☐SOCIAL ☐CLERICAL ☐

## APPENDIX E

ABERDEEN INVENTORY

Achievement motivation has been the subject of much research (McClelland, 1953; Atkinson and Feather, 1966). The results thus far have been largely contradictory. More specific measures of "academic motivation" are needed, and indeed, have been developed. One such scale has been devised by Buxton (1966), another by Schlessner and Finger (1962). In their scale, Finger and Schlessner (1965) isolated a factor of "academic motivation" which appeared to cover "aspiration," "attitudes to school," and "study habits." The Entwistle (1968) research is a follow-up of the work of Finger and Schlessner, as well as others, in an attempt to produce a scale which covers the dimensions contributing to academic motivation. The rationale for the development of the scale is given in Entwistle (1968).

## ABERDEEN INVENTORY

Here are some questions about school and school work. In all the questions you must answer either 'yes' or 'no'. Put a circle round the answer you wish to give. Answer ALL the questions TRUTHFULLY but quickly.

- |  |     |    |
|--|-----|----|
| 1. Do you like being asked questions in class?   | YES | NO |
| 2. Does your mind often wander off the subject during lessons?                                 | YES | NO |
| 3. Do you enjoy most lessons?  | YES | NO |
| 4. Do your parents want you to start work when you are 15?                                     | YES | NO |
| 5. Do you think school is rather a waste of time?  | YES | NO |
| 6. Do you like to leave your homework to the last minute?                                      | YES | NO |
| 7. If you were given lower marks than usual in a test, would this make you unhappy?            | YES | NO |
| 8. Do you expect school to provide you with good qualifications for a job?                     | YES | NO |
| 9. Is it important to you to do well at school?  | YES | NO |
| 10. Are you happier working with your hands?   | YES | NO |
| 11. When you are given a difficult problem, do you enjoy trying to find the answer?            | YES | NO |
| 12. Do your parents expect you to go to university or college?                                 | YES | NO |
| 13. Do you generally find lessons rather dull?   | YES | NO |
| 14. Do you dread being given a test on your homework?  | YES | NO |
| 15. Do your friends think that you never take work seriously?                                  | YES | NO |
| 16. Would you like to leave school as soon as possible?  | YES | NO |
| 17. Do your parents tell you to enjoy yourself and not to worry about school?                  | YES | NO |
| 18. Do you work hard most of the time?   | YES | NO |
| 19. Do your parents think that you must do well at school if you are to succeed in later life? | YES | NO |
| 20. Do your teachers think that you misbehave too much?  | YES | NO |
| 21. Do you worry about not doing well in class?  | YES | NO |
| 22. Are you more interested in games than school work?   | YES | NO |
| 23. Do you find it difficult to keep your mind on your work?                                   | YES | NO |
| 24. Do you always try your hardest to get your homework right?                                 | YES | NO |

## APPENDIX F

ROSEN SCALE

There is an unverified notion that social groups in American society are characterized by a dissimilar concern with achievement, particularly as it is expressed through social mobility. Rosen (1959) has hypothesized that social groups possess, to a disparate extent, two components of this achievement orientation. The first is a psychological factor involving a personality characteristic called "achievement motivation" (McClelland, 1953) which provides an internal impetus to excel. The second is a cultural factor consisting of certain "value orientations" which define and implement achievement motivated behavior. Rosen developed his scale in an attempt to isolate the cultural factors which are related to achievement. The rationale for the development of the scale is given in Rosen (1959).



## ROSEN SCALE

Below are a number of statements. If you agree with the statement place a check beside AGREE. If you disagree with the statement place a check beside DISAGREE. For example: 1. Ice cream is good. AGREE ☒ DISAGREE ☐  
If you agree, place the check mark as shown.

1. All I want out of life in the way of a career is a secure, not too difficult job, with enough pay to afford a nice car and eventually a home of my own. AGREE ☐ DISAGREE ☐
2. When a man is born the success he is going to have is already in the cards. AGREE ☐ DISAGREE ☐
3. Even though parents often seem too strict, when a person gets older he will realize it was beneficial. AGREE ☐ DISAGREE ☐
4. If my parents told me to stop seeing a friend of my own sex, I'd see that friend anyway. AGREE ☐ DISAGREE ☐
5. The best kind of job is one where you are part of an organization all working together, even if you don't get individual credit. AGREE ☐ DISAGREE ☐
6. Planning only makes a person unhappy since your plans hardly ever work out anyway. AGREE ☐ DISAGREE ☐
7. Nowadays with world conditions the way they are the wise person lives for today and lets tomorrow take care of itself. AGREE ☐ DISAGREE ☐
8. Education and learning are more important in determining a person's happiness than money and what it will buy. AGREE ☐ DISAGREE ☐
9. Parents would be greatly upset if their son ended up doing factory work. AGREE ☐ DISAGREE ☐
10. It's silly for a teenager to put money in a car when the money could be used to get started in a business or for an education. AGREE ☐ DISAGREE ☐
11. Nothing in life is worth the sacrifice of moving away from your parents. AGREE ☐ DISAGREE ☐
12. When the time comes for a boy to take a job, he should stay near his parents even if it means giving up a good job. AGREE ☐ DISAGREE ☐
13. Even when teenagers get married their main loyalty still belongs to their mother and father. AGREE ☐ DISAGREE ☐
14. Parents seem to believe that you can't take the opinion of a teenager seriously. AGREE ☐ DISAGREE ☐

## APPENDIX G

BUXTON SCALE

Pupil strength of motivation to do well in school work varies from culture to culture, teacher to teacher, and time to time. The determinants of motivation are many and complex. Atkinson (1964) posits three concepts as central to motivation: strength of expectancy of success or failure in attaining a goal; degree of desirability or repulsiveness of the goal; and strength of persisting motives which may negate or supplement one another. This scale was developed as an attempt to measure objectively an instance of the third of these, the persisting motive or need to achieve in school. The rationale for the development of the scale is given in Buxton (1966, 1967).

## BUXTON SCALE

Below are a number of paired statements. For each pair of statements you are to choose the one more nearly true of you (or the one which is less untrue of you) and circle the number beside it.

For example: 1a. I am a boy.  
1b. I am a girl.

If you are a boy, then statement 1a is the one more nearly true of you, so circle in this way (1a). If you are a girl, then 1b is the one more nearly true of you, so circle in this way (1b). Make sure you select one from all pairs. Be honest. No one will be told how you answered.

- 1a. I don't mind working at break, if there is work to be done.
- 1b. I usually don't understand what my teacher is criticizing in my work.
- 2a. I don't care much about my marks.
- 2b. I don't mind not having sport, if there is work to be done.
- 3a. Sports are more important to me than is school work.
- 3b. Before a test I often lie awake part of the night worrying.
- 4a. It doesn't disturb me much to be told off by a teacher.
- 4b. Whenever I catch myself being lazy I do something about it straightaway.
- 5a. When I find that I don't understand something I try very hard to master it.
- 5b. If I get a low mark I feel rather discouraged, but tell myself I must do better next time.
- 6a. I often find my lessons so difficult I just don't want to think about them.
- 6b. When I try too hard in my studies I become nervous and afraid I'll make a fool of myself.
- 7a. I think it more important to have a bit of fun than to work hard all the time in school.
- 7b. I set standards for myself and then go out to achieve them.
- 8a. I like to have my friends be proud of my work.
- 8b. I don't profit much from a teacher's criticisms of my work.
- 9a. I find it difficult to eat on the day I am to have an important test.
- 9b. Much of what I learn in school makes no difference to me.
- 10a. When someone beats me by a long way I don't much care, but if he beats me just a little I am very disappointed.
- 10b. I don't like to waste time.
- 11a. I don't fool around in class.
- 11b. I find it's no use trying to do things that are too hard for me in school.
- 12a. I don't feel right if I let down in my work.
- 12b. There are times when I feel as though I shall never get anywhere in school.

- 13a. My teachers have a right to expect me to do my best.
- 13b. I shall be happiest when I am old enough to leave school.
- 14a. I don't wait for the teacher to tell me to get on with my work.
- 14b. I think teachers and parents make too much of neatness and tidiness in school work, for it isn't that important.
- 15a. I think it is more important to have friends than to be top of the class.
- 15b. I am determined to do the best work I can.
- 16a. I like keeping busy with my work.
- 16b. If a teacher doesn't like my work it doesn't particularly disturb me.
- 17a. I pay strict attention to what the teacher says so I won't miss anything.
- 17b. Before a test I feel irritable or jumpy.
- 18a. I just sit quietly without raising my hand, so the teacher won't call on me to answer questions in class.
- 18b. My parents are always at me to do better in school, and this makes me feel like doing just the opposite.
- 19a. I don't care whether I pay attention to the teacher.
- 19b. I just can't keep from worrying about my schoolwork.

## APPENDIX H

Name: \_\_\_\_\_ Age: \_\_\_\_\_ Grade: \_\_\_\_\_ School: \_\_\_\_\_

## I N S T R U C T I O N S

This study is aimed at finding the meanings that different words and phrases can have. You are asked to help by filling in the blanks provided. In this booklet you will find a number of words and phrases in capital letters, and underneath each of them a set of opposites. An example is the word SPORT -- which you will see is followed by more than one pair of opposites like this:

## SPORT

Good	( )	( )	( )	: :	( )	( )	( )	Bad
Hard	( )	( )	( )	: :	( )	( )	( )	Soft
Dangerous	( )	( )	( )	: :	( )	( )	( )	Safe

Between each pair of opposites there are seven small spaces. The middle one is shown like this :\_: and three spaces on either side are shown like this ( ).

You are required to put a cross in one of the spaces between each pair of opposites to show where you think the meaning of the word in capital letters would be. For example, if you thought the word SPORT meant for you something neither very good nor very bad you would place your cross in the middle space like this:

Good ( ) ( ) ( ) :X: ( ) ( ) ( ) Bad

If you thought its meaning was slightly more good than bad, you would put your cross like this:

Good ( ) ( ) (X) :\_: ( ) ( ) ( ) Bad

If you thought its meaning was quite good you might like to do this:

Good ( ) (X) ( ) :\_: ( ) ( ) ( ) Bad

But if you thought its meaning was very good, you would put a cross like this:

Good (X) ( ) ( ) : ( ) ( ) ( ) Bad

In the same way, you would place your crosses nearer 'Bad', and if you thought the meaning was quite bad, you would put the cross nearer still to 'Bad', and if you thought the meaning was very bad, you would put a cross in the space next to 'Bad'.

Think carefully and put your cross at the point you think most suitable. Think about each pair of opposites separately. If you make a mistake or change your mind, put a circle around the mistake like this (X) and put another cross where you think it should be. Remember that there is no 'correct' answer; you are asked to indicate what each word means to you. Be careful to put a cross between every pair of opposites.

# 1. POLICEMAN

Like	( )	( )	( )	: :	( )	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	( )	Clean



## 2. MYSELF

Like	( )	( )	( )	:	:	( )	( )	( )	Dislike
Kind	( )	( )	( )	:	:	( )	( )	( )	Cruel
Lazy	( )	( )	( )	:	:	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	:	:	( )	( )	( )	Superior
Beautiful	( )	( )	( )	:	:	( )	( )	( )	Ugly
Weak	( )	( )	( )	:	:	( )	( )	( )	Strong
Dishonest	( )	( )	( )	:	:	( )	( )	( )	Honest
Quiet	( )	( )	( )	:	:	( )	( )	( )	Noisy
Good	( )	( )	( )	:	:	( )	( )	( )	Bad
Unfair	( )	( )	( )	:	:	( )	( )	( )	Fair
Powerful	( )	( )	( )	:	:	( )	( )	( )	Powerless
Excitable	( )	( )	( )	:	:	( )	( )	( )	Calm
Hard	( )	( )	( )	:	:	( )	( )	( )	Soft
Wise	( )	( )	( )	:	:	( )	( )	( )	Stupid
Cold	( )	( )	( )	:	:	( )	( )	( )	Hot
Serious	( )	( )	( )	:	:	( )	( )	( )	Humorous
Black	( )	( )	( )	:	:	( )	( )	( )	White
Fast	( )	( )	( )	:	:	( )	( )	( )	Slow
Friendly	( )	( )	( )	:	:	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	:	:	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	:	:	( )	( )	( )	Clean

## 3. Mother

Like	( )	( )	( )	:	:	( )	( )	( )	Dislike
Kind	( )	( )	( )	:	:	( )	( )	( )	Cruel
Lazy	( )	( )	( )	:	:	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	:	:	( )	( )	( )	Superior
Beautiful	( )	( )	( )	:	:	( )	( )	( )	Ugly
Weak	( )	( )	( )	:	:	( )	( )	( )	Strong
Dishonest	( )	( )	( )	:	:	( )	( )	( )	Honest
Quiet	( )	( )	( )	:	:	( )	( )	( )	Noisy
Good	( )	( )	( )	:	:	( )	( )	( )	Bad
Unfair	( )	( )	( )	:	:	( )	( )	( )	Fair
Powerful	( )	( )	( )	:	:	( )	( )	( )	Powerless
Excitable	( )	( )	( )	:	:	( )	( )	( )	Calm
Hard	( )	( )	( )	:	:	( )	( )	( )	Soft
Wise	( )	( )	( )	:	:	( )	( )	( )	Stupid
Cold	( )	( )	( )	:	:	( )	( )	( )	Hot
Serious	( )	( )	( )	:	:	( )	( )	( )	Humorous
Black	( )	( )	( )	:	:	( )	( )	( )	White
Fast	( )	( )	( )	:	:	( )	( )	( )	Slow
Friendly	( )	( )	( )	:	:	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	:	:	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	:	:	( )	( )	( )	Clean

## 4. INDIAN

Like	( )	( )	( )	: :	( )	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	( )	Clean

## 5. SUCCESS

Like	( )	( )	( )	: :	( )	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	( )	Clean

## 6. MYSELF AS I WOULD LIKE TO BE

Like	( )	( )	( )	: :	( )	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	( )	Clean

## 7. FRIEND

Like	( )	( )	( )	: :	( )	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	( )	Clean

## 8. ENEMY

Like	( )	( )	( )	: :	( )	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	( )	Clean

## 9. FATHER

Like	( )	( )	( )	: :	( )	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	( )	Clean

## 10. FAILURE

Like	( )	( )	( )	: :	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	Clean

## 11. SCHOOL

Like	( )	( )	( )	: :	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	Clean

## 12. MONEY

Like	( )	( )	( )	: :	( )	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	( )	Clean

## 13. FRIEND I WOULD LIKE TO HAVE

Like	( )	( )	( )	: :	( )	( )	( )	Dislike
Kind	( )	( )	( )	: :	( )	( )	( )	Cruel
Lazy	( )	( )	( )	: :	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	: :	( )	( )	( )	Superior
Beautiful	( )	( )	( )	: :	( )	( )	( )	Ugly
Weak	( )	( )	( )	: :	( )	( )	( )	Strong
Dishonest	( )	( )	( )	: :	( )	( )	( )	Honest
Quiet	( )	( )	( )	: :	( )	( )	( )	Noisy
Good	( )	( )	( )	: :	( )	( )	( )	Bad
Unfair	( )	( )	( )	: :	( )	( )	( )	Fair
Powerful	( )	( )	( )	: :	( )	( )	( )	Powerless
Excitable	( )	( )	( )	: :	( )	( )	( )	Calm
Hard	( )	( )	( )	: :	( )	( )	( )	Soft
Wise	( )	( )	( )	: :	( )	( )	( )	Stupid
Cold	( )	( )	( )	: :	( )	( )	( )	Hot
Serious	( )	( )	( )	: :	( )	( )	( )	Humorous
Black	( )	( )	( )	: :	( )	( )	( )	White
Fast	( )	( )	( )	: :	( )	( )	( )	Slow
Friendly	( )	( )	( )	: :	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	: :	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	: :	( )	( )	( )	Clean



## 14. WHITE MAN

Like	( )	( )	( )	::	( )	( )	( )	Dislike
Kind	( )	( )	( )	::	( )	( )	( )	Cruel
Lazy	( )	( )	( )	::	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	::	( )	( )	( )	Superior
Beautiful	( )	( )	( )	::	( )	( )	( )	Ugly
Weak	( )	( )	( )	::	( )	( )	( )	Strong
Dishonest	( )	( )	( )	::	( )	( )	( )	Honest
Quiet	( )	( )	( )	::	( )	( )	( )	Noisy
Good	( )	( )	( )	::	( )	( )	( )	Bad
Unfair	( )	( )	( )	::	( )	( )	( )	Fair
Powerful	( )	( )	( )	::	( )	( )	( )	Powerless
Excitable	( )	( )	( )	::	( )	( )	( )	Calm
Hard	( )	( )	( )	::	( )	( )	( )	Soft
Wise	( )	( )	( )	::	( )	( )	( )	Stupid
Cold	( )	( )	( )	::	( )	( )	( )	Hot
Serious	( )	( )	( )	::	( )	( )	( )	Humorous
Black	( )	( )	( )	::	( )	( )	( )	White
Fast	( )	( )	( )	::	( )	( )	( )	Slow
Friendly	( )	( )	( )	::	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	::	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	::	( )	( )	( )	Clean

## 15. TEACHER

Like	( )	( )	( )	::	( )	( )	( )	Dislike
Kind	( )	( )	( )	::	( )	( )	( )	Cruel
Lazy	( )	( )	( )	::	( )	( )	( )	Ambitious
Inferior	( )	( )	( )	::	( )	( )	( )	Superior
Beautiful	( )	( )	( )	::	( )	( )	( )	Ugly
Weak	( )	( )	( )	::	( )	( )	( )	Strong
Dishonest	( )	( )	( )	::	( )	( )	( )	Honest
Quiet	( )	( )	( )	::	( )	( )	( )	Noisy
Good	( )	( )	( )	::	( )	( )	( )	Bad
Unfair	( )	( )	( )	::	( )	( )	( )	Fair
Powerful	( )	( )	( )	::	( )	( )	( )	Powerless
Excitable	( )	( )	( )	::	( )	( )	( )	Calm
Hard	( )	( )	( )	::	( )	( )	( )	Soft
Wise	( )	( )	( )	::	( )	( )	( )	Stupid
Cold	( )	( )	( )	::	( )	( )	( )	Hot
Serious	( )	( )	( )	::	( )	( )	( )	Humorous
Black	( )	( )	( )	::	( )	( )	( )	White
Fast	( )	( )	( )	::	( )	( )	( )	Slow
Friendly	( )	( )	( )	::	( )	( )	( )	Unfriendly
Proud	( )	( )	( )	::	( )	( )	( )	Ashamed
Dirty	( )	( )	( )	::	( )	( )	( )	Clean

## APPENDIX I

## CORRELATION MATRIX OF GRADE SEVEN NON-INDIAN SAMPLE (N=223)

VARIABLE	Vocational Aspiration	Actual Self	Ideal Self
Work Methods	208*	294*	065
Delay Avoidance	259*	293*	095
Teacher Approval	101	180*	093
Education Acceptance	206*	267*	153
Vocational Aspiration		097	042
Actual Self	097		
Ideal Self	042	424*	
Economic	058	029	-001
Technical	012	007	029
Outdoor	-043	041	073
Service	-145**	-113	-094
Humane	004	-001	-048
Artistic	-011	-049	-078
Scientific	116	125	125
Aberdeen	258*	305*	072
Rosen	034	018	006
Buxton	207*	182*	-025

\* Significant at .01 level

\*\* Significant at .05 level

## APPENDIX J

## CORRELATION MATRIX OF GRADE SEVEN INDIAN SAMPLE (N=49)

VARIABLE	Vocational Aspiration	Actual Self	Ideal Self
Work Methods	-026	387*	-040
Delay Avoidance	047	276	-069
Teacher Approval	001	149	006
Education Acceptance	151	154	-067
Vocational Aspiration		093	-009
Actual Self	093		
Ideal Self	-009	430*	
Economic	020	-257	-085
Technical	099	173	009
Outdoor	044	313**	102
Service	-147	143	247
Humane	009	-103	018
Artistic	-216	-063	440*
Scientific	247	-048	-106
Aberdeen	132	178	-017
Rosen	-150	097	131
Buxton	252	225	-039

\* Significant at .01 level

\*\* Significant at .05 level

# APPENDIX K

## SUMMARY OF STEPWISE REGRESSION ANALYSIS OF GRADE SEVEN NON-INDIAN SAMPLE

Criterion	Predictors	Multiple R	Variance Accounted for by predictors	Total Variance Accounted for	Variance Accounted for by other variables
Vocational Aspiration	3	.26	.07	.11	.05
Actual Self	8 16	.42 .51	.18 .08	.29	.03
Ideal Self	7	.42	.18	.23	.05

# APPENDIX L

## SUMMARY OF STEPWISE REGRESSION ANALYSIS OF GRADE SEVEN INDIAN SAMPLE

Criterion	Predictors	Multiple R	Variance Accounted for by predictors	Total Variance Accounted for	Variance Accounted for by other variables
Vocational Aspiration	18	.25	.06	.36	.19
	14	.35	.06		
	15	.41	.05		
Actual Self	8	.43	.19	.49	.07
	2	.59	.16		
	11	.65	.07		
Ideal Self	7	.43	.19	.32	.08
	2	.49	.05		

## APPENDIX M

## CORRELATION MATRIX OF GRADE EIGHT NON-INDIAN SAMPLE (N=99)

VARIABLE	Vocational Aspiration	Actual Self	Ideal Self
Work Methods	138	287*	094
Delay Avoidance	087	299*	125
Teacher Approval	050	128	143
Education Acceptance	178	239**	219**
Vocational Aspiration		196**	015
Actual Self	196**		
Ideal Self	015	375*	
Economic	-024	190	201**
Technical	008	-234**	-181
Outdoor	-179	-114	-024
Service	-259*	100	142
Humane	003	013	-010
Artistic	175	188	126
Scientific	343*	009	-120
Aberdeen	187	276*	260*
Rosen	104	109	193
Buxton	134	255*	217**

\* Significant at .01 level

\*\* Significant at .05 level



## APPENDIX N

## CORRELATION MATRIX OF GRADE EIGHT INDIAN SAMPLE (N=11)

VARIABLE	Vocational Aspiration	Actual Self	Ideal Self
Work Methods	246	149	479
Delay Avoidance	-004	-085	376
Teacher Approval	-164	-433	-008
Education Acceptance	-141	-262	144
Vocational Aspiration		467	194
Actual Self	467		
Ideal Self	194	558	
Economic	596	628**	355
Technical	-664**	-641**	-279
Outdoor	-271	-075	-187
Service	-003	-040	278
Humane	337	465	-130
Artistic	446	550	309
Scientific	650**	174	204
Aberdeen	532	224	141
Rosen	-294	526	142
Buxton	333	012	206

\* Significant at .01 level

\*\* Significant at .05 level

## APPENDIX 0

## CORRELATION MATRIX OF GRADE NINE NON-INDIAN SAMPLE (N=59)

VARIABLE	Vocational Aspiration	Actual Self	Ideal Self
Work Methods	072	248	167
Delay Avoidance	259**	280**	067
Teacher Approval	158	098	193
Education Acceptance	084	080	039
Vocational Aspiration		033	-069
Actual Self	033		
Ideal Self	-069	486**	
Economic	056	-038	158
Technical	-158	-032	-207
Outdoor	-458*	071	015
Service	-236	-087	039
Humane	231	-006	078
Artistic	317*	123	193
Scientific	397*	-081	-176
Aberdeen	131	037	046
Rosen	-035	433*	171
Buxton	168	-107	125

\* Significant at .01 level

\*\* Significant at .05 level

## APPENDIX P

## SUMMARY OF STEPWISE REGRESSION ANALYSIS OF GRADE EIGHT NON-INDIAN SAMPLE

Criterion	Predictors	Multiple R	Variance Accounted for by predictors	Total Variance Accounted for	Variance Accounted for by other variables
Vocational Aspiration	15	.34	.12	.31	
	14	.44	.19		
Actual Self	8	.38	.14	.29	.08
	3	.45	.07		
Ideal Self	7	.38	.14	.32	.18

# APPENDIX Q

## SUMMARY OF STEPWISE REGRESSION ANALYSIS OF GRADE NINE NON-INDIAN SAMPLE

Criterion	Predictors	Multiple R	Variance Accounted for by predictors	Total Variance Accounted for	Variance Accounted for by other variables
Vocational Aspiration	11	.46	.21	.44	.09
	9	.54	.08		
	3	.60	.06		
Actual Self	8	.49	.24	.51	.15
	17	.60	.13		
Ideal Self	7	.49	.24	.48	

## APPENDIX R

## CORRELATION MATRIX OF GRADE SEVEN NON-INDIAN FEMALE SAMPLE (N=107)

VARIABLE	Vocational Aspiration	Actual Self	Ideal Self
Work Methods	213**	211**	111
Delay Avoidance	183	282*	115
Teacher Approval	058	150	092
Education Acceptance	200**	238**	166
Vocational Aspiration		067	-071
Actual Self	067		
Ideal Self	-071	567*	
Economic	032	086	035
Technical	-036	-151	-130
Outdoor	099	-006	008
Service	-034	-127	-121
Humane	-062	074	130
Artistic	112	096	065
Scientific	-047	073	019
Aberdeen	133	196**	077
Rosen	-046	103	062
Buxton	100	106	-032

\* Significant at .01 level

\*\* Significant at .05 level

## APPENDIX S

## CORRELATION MATRIX OF GRADE SEVEN INDIAN FEMALE SAMPLE (N=28)

VARIABLE	Vocational Aspiration	Actual Self	Ideal Self
Work Methods	-021	493*	-076
Delay Avoidance	107	312	-266
Teacher Approval	063	-009	-160
Education Acceptance	070	209	-163
Vocational Aspiration		-021	-237
Actual Self	-021		
Ideal Self	-237	044	
Economic	022	-107	-255
Technical	258	-018	190
Outdoor	-030	197	160
Service	-071	186	299
Humane	-039	-228	160
Artistic	-233	010	-347
Scientific	324	180	-085
Aberdeen	107	121	-373**
Rosen	-126	157	328
Buxton	222	231	-167

\* Significant at .01 level

\*\* Significant at .05 level



## APPENDIX T

## SUMMARY OF STEPWISE REGRESSION ANALYSIS OF GRADE SEVEN NON-INDIAN FEMALE SAMPLE

Criterion	Predictors	Multiple R	Variance Accounted for by predictors	Total Variance Accounted for	Variance Accounted for by other variables
Vocational Aspiration	--	---	---	---	---
Actual Self	8	.57	.32	.40	.08
Ideal Self	7	.57	.32	.38	.06

# APPENDIX U

## SUMMARY OF STEPWISE REGRESSION ANALYSIS OF GRADE SEVEN INDIAN FEMALE SAMPLE

Criterion	Predictors	Multiple R	Variance Accounted for by predictors	Total Variance Accounted for	Variance Accounted for by other variables
Vocational Aspiration	15	.33	.11	.67	.24
	10	.44	.09		
	8	.51	.07		
	13	.56	.05		
	18	.60	.05		
Actual Self	11	.64	.06	.63	.16
	2	.49	.24		
	11	.64	.17		
	4	.69	.06		
Ideal Self	16	.37	.14	.74	.19
	14	.52	.13		
	6	.60	.08		
	1	.65	.06		
	2	.71	.08		
	13	.75	.06		

## APPENDIX V

## CORRELATION MATRIX OF GRADE SEVEN NON-INDIAN MALE SAMPLE (N=116)

VARIABLE	Vocational Aspiration	Actual Self	Ideal Self
Work Methods	226**	393*	036
Delay Avoidance	330*	324*	099
Teacher Approval	132	217**	112
Education Acceptance	228**	311*	189**
Vocational Aspiration		116	136
Actual Self	116		
Ideal Self	136	224**	
Economic	146	030	019
Technical	-100	062	059
Outdoor	-198**	043	079
Service	-192**	-087	-040
Humane	115	-016	-177
Artistic	008	-121	-145
Scientific	179**	156	213**
Aberdeen	344*	414*	072
Rosen	110	-049	-033
Buxton	302*	275*	000

\* Significant at .01 level

\*\* Significant at .05 level

## APPENDIX W

## CORRELATION MATRIX OF GRADE SEVEN INDIAN MALE SAMPLE (N=21)

VARIABLE	Vocational Aspiration	Actual Self	Ideal Self
Work Methods	-031	298	-022
Delay Avoidance	002	223	053
Teacher Approval	-053	279	093
Education Acceptance	214	108	-016
Vocational Aspiration		204	105
Actual Self	204		
Ideal Self	105	713*	
Economic	006	-428**	-188
Technical	-026	287	105
Outdoor	129	371	191
Service	-208	157	202
Humane	061	125	-180
Artistic	-168	-390	021
Scientific	153	-315	-174
Aberdeen	159	283	160
Rosen	-172	045	046
Buxton	293	239	025

\* Significant at .01 level

\*\* Significant at .05 level

## APPENDIX X

## SUMMARY OF STEPWISE REGRESSION ANALYSIS OF GRADE SEVEN NON-INDIAN MALE SAMPLE

Criterion	Predictors	Multiple R	Variance Accounted for by predictors	Total Variance Accounted for	Variance Accounted for by other variables
Vocational Aspiration	16	.34	.12	.26	.14
Actual Self	16	.41	.17	.28	.11
Ideal Self	7	.22	.05	.20	.15

# APPENDIX Y

## SUMMARY OF STEPWISE REGRESSION ANALYSIS OF GRADE SEVEN INDIAN MALE SAMPLE

Criterion	Predictors	Multiple R	Variance Accounted for by predictors	Total Variance Accounted for	Variance Accounted for by other variables
Vocational Aspiration	18	.30	.09	.73	.16
	1	.39	.06		
	14	.47	.07		
	12	.56	.09		
	2	.62	.07		
	16	.67	.06		
Actual Self	3	.70	.05	.97	.12
	4	.76	.08		
	8	.71	.51		
Ideal Self	14	.82	.16		
	16	.88	.10		
	15	.92	.08		
	7	.71	.51	.95	.14
	14	.78	.11		
	12	.82	.06		
	11	.85	.06		
	16	.93	.07		



APPENDIX Z

CORRELATION MATRIX FOR SEMANTIC DIFFERENTIAL CONCEPTS (N=139)

Concept	Policeman	Myself	Mother	Indian	Success	Myself as I would like to be.	Friend	Enemy	Father	Failure	School	Money	Friend I would like to have	White Man	Teacher
Policeman															
Myself	925														
Mother	952	965													
Indian	930	938	940												
Success	936	970	965	927											
Myself as I would like to be	029	-005	019	-080	007										
Friend	-094	-086	-092	-133	-065	521									
Enemy	138	039	076	106	054	-225	-084								
Father	062	078	091	006	083	450	500	-168							
Failure	055	038	062	125	-020	-348	-231	302	-137						
School	131	018	062	061	075	-045	104	370	020	151					
Money	-166	-035	-103	-186	-045	414	227	-379	103	-419	-340				
Friend I would like to have	-129	-082	-069	-166	-096	584	420	-192	411	-197	-096	380			
White Man	-091	023	-028	-141	-006	227	263	-077	264	-161	-070	326	322		
Teacher	096	-008	058	237	038	086	268	437	182	148	686	-298	-009	-013	

## APPENDIX AA

## VARIMAX ROTATION FOR COMBINED DATA

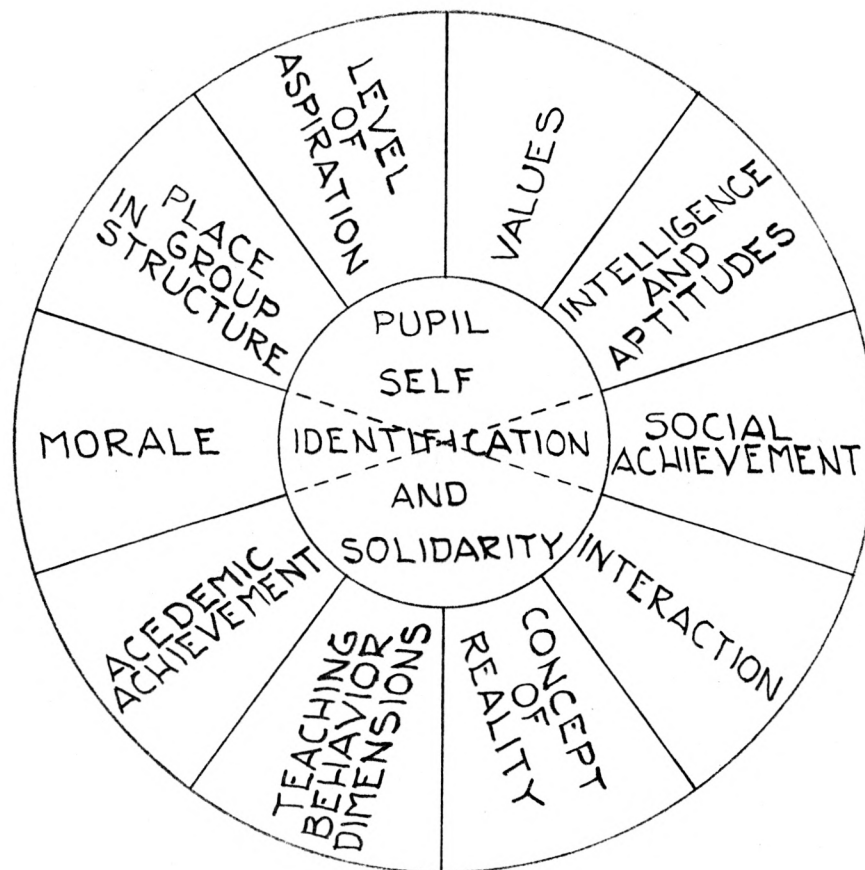
CONCEPT	Factor I	Factor II	Factor III
Policeman	965	-045	-114
Myself	983	002	027
Mother	986	002	-044
Indian	963	-124	-061
Success	983	019	-012
Myself as I would like to be	013	805	102
Friend	-086	768	-108
Enemy	048	-232	-663
Father	096	702	-110
Failure	024	-422	-389
School	037	057	-812
Money	-077	477	587
Friend I would like to have	-088	730	138
White Man	-032	492	123
Teacher	012	226	-861
VARIANCE	32.0	20.3	16.3

CONCLUSION TO REPORT

## CONCLUSION TO REPORT

The report: Intercultural Education: A Study of the Effects of Interperson-Perceptions upon Indian and Non-Indian Pupils in Southern Alberta was a many-faceted attempt to gain understandings of Indian and non-Indian pupil self identification and solidarity. The graphic figure below, which was presented in the Introduction to the study, indicates the approaches used by the researchers as attempts to gain understandings.

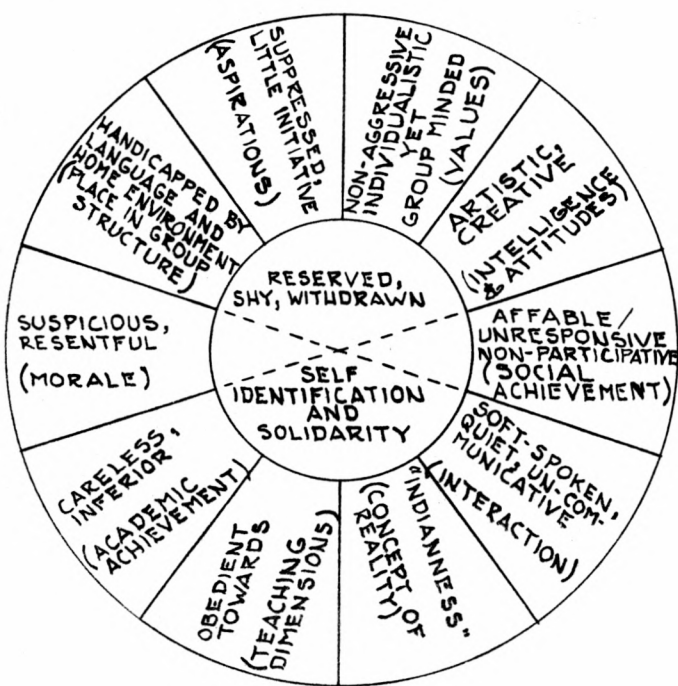
The Preliminary Model  
Indian and Non-Indian Pupil  
Interperson-Perceptions



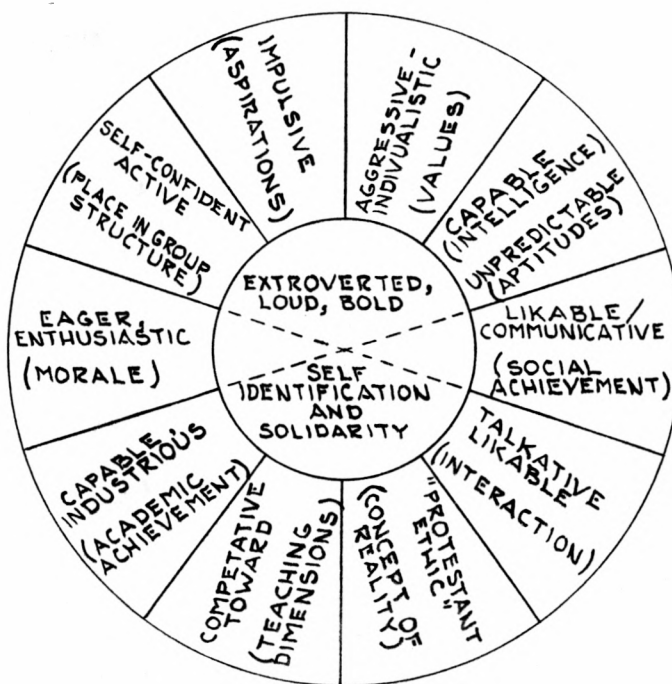
Note: Interdependencies may be read in areas opposing each other on the paradigm, e.g. Morale and Social Achievement.

It was predicted, in a broad sense, that previous research indications plus the findings of the adjective survey which asked teachers of the study to indicate what they "really thought Indian and non-Indian children were like" (answered by twenty-three of twenty-nine teachers in the study; see Introduction to the research), would produce similarities and differences which might exist between Indian and non-Indian pupils' interperson-perceptions as almost polar opposite constructs of pupil self identifications and solidarities.

The Secondary Models  
Conjectures  
re  
Indian vs. Non-Indian Pupil  
Interperson-Perceptions



Indian



Non-Indian

Note: Interdependencies of variables may be read in areas opposing each other on paradigms.

The question which was posed at the close of the Introduction to the research was: How may the total study be considered in relation to these preliminary models of self identification and solidarity to the advantage of better educational procedures in dealing with Indian and non-Indian pupils?

The answers, which follow, are drawn from the summaries and recommendations of the five parts of the research. An attempt has been made to choose perhaps the more salient features for consideration.

#### The Preliminary Model

Part I of the research deals with pupils' perceptions of morale, social achievement, and teaching dimensions of learning behavior to gain a preliminary view of the classroom climates. The more important considerations follow:

##### 1. Pupil Morale as Assessed by the Gordon-Adler-McNeil Pupil Morale Scale.

- 1.1 Indian pupils' peer morale, in general, is high; although it does appear to be lower for Indian pupils in Integrated classrooms. They seem to like the school as an institution but are frustrated by concerns for teacher likings-dislikings, and dislike doing homework. School Dropout Morale and School Anxiety Morale bear high factor loadings. These pupils have a sense of time boredom with the learning task, and are anxious about the way they get along with members of their class.
- 1.2 Non-Indian pupils also are highly oriented to their peers. They suffer some teacher and school as an institution negative ambivalences. They admit to some school anxiety in that school work makes them "nervous." Although they also admit to time boredom, their anxiety appears to be more centered around "getting ahead - work success" orientations.

An answer appears to lie in a priority planning recommendation regarding the training of teachers. Teachers need to gain better understandings of expressive-helping means of pupil endorsements, and inculcations of work interests to reduce the pupil sense of anxiety and time boredom.

Priority planning for training native teachers seems needed so



that some adult models of their own race are available to aid Indian pupils in their motivations for and identifications with learning.

Special helps seem indicated for work with native pupils, such as use of native teacher aides, learning materials which give positive emphases to native cultures, and counselling aid to improve trans-cultural perceptions of pupils where needed.

2. Pupil Perceived Social Achievement as Assessed by the Lyon Perceived Social Achievement Scale.

2.1 Indian children indicate a consummatory-liking set of "key" perceptions. Self identification is perceived as involvement in telling classmates about schoolwork. Family and neighborhood friends assume importance as significant others for these pupils. In learning relevances, the native pupils are concerned about accomplishment in school, and whether or not their family cares about their scholarly achievements. Indian pupils in integrated classrooms seem to hold more "work-success" orientations, while non-integrated Indian pupils show more endorsement of "consummatory-liking" concepts.

The "key" perceptions of integrated and non-integrated Indian pupils were conceived from the key item of the factor sets and are reintroduced here because of their interesting perceptual differences.

### Indian Pupils in Non-Integrated Classrooms

<u>Topic Factor Set</u> <u>Key Question</u>		<u>Consummatory-Liking</u> <u>Orientations</u>
i) being liked by friends who live near you	--	"friendship - 'my brother and me' "
ii) concern over being liked by one's family	--	"family affectivity consolidation"
iii) having a good time and working with friends who live near you	--	"good time and working with peers gratifications"
iv) doing same things and feeling same way about school as classmates	--	"doing-feeling participations with classmates"
v) how much you and your friends want to learn good English	--	"larger societal adaptation problems"
vi) classmate esteem for being "smart"	--	"esteem success problems"
vii) liking learning at school with friends	--	"conjoint liking-learning problems"

### Indian Pupils in Integrated Classrooms

<u>Topic Factor Set</u> <u>Key Question</u>		<u>Consummatory-Liking</u> <u>Orientations</u>
i) helping classmates	--	"brother's keeper"
ii) family success	--	"family work-success"
iii) family liking and expectations for accomplishment	--	"family expectations for individual work accomplishment"
iv) working and doing things with neighborhood friends	--	"peer expectations for work activity"
v) learning: classmate "doingness"	--	"peer expectations for work activity"
vi) learning: being on time	--	"worthy time accomplishments"
vii) learning: being liked by peers	--	"friendship - my 'brother and me' "
viii) family concern for failure at school	--	"family expectations for individual work accomplishment"

- 2.2 Non-Indian pupils remind one of "present day social concerns about youth." In self perception, they are involved with self expressiveness or ventilation of feelings about school work with classmates and questioning the part they play in group decision-making processes. Significant others include classroom peers, families, and then neighborhood friends. They are concerned that family expectations for success in school be "lived up to." Classmate esteem is important. The learning focus for these pupils may be said to be "others-to-self" directed as opposed to that of Indian pupils who are more "self-to-others" directed.

The Perceived Social Achievement perceptions indicate that Indian pupils in integrated classrooms appear to be more similar to non-Indian pupils, at least in work-success orientations. The important consideration seems to be helping teachers to understand just what methods and processes do tend to stimulate work-success orientations for native children. Integrated classroom climates seem indicated, however such classrooms should be carefully assessed to view the best kinds of helps for native morale and social achievements.

More involvement with their children's learning processes seems needed for parents of both Indian and non-Indian origins to insure better pupil concepts of parental supports of self identification and academic achievement.

3. Teaching Dimensions of Learning Behavior as Assessed by the Gordon-Adler-McNeil Teaching Dimensions of Learning Behavior Scale.

- 3.1 Indian pupils are aware of and want teaching behaviors which are expressive, task, and small group oriented. They like teachers who use pupil ideas as well as ideas of teachers and ideas in books. They want more help with school work, desire teachers who make sure they learn the facts but also care how they feel, and who given them credit for how well they do in class. In task dimensions, they particularly want to use a certain kind of work again after they have learned it, and want all exercises and test papers corrected. They like and want to work in small groups.
- 3.2 Non-Indian pupils endorse expressive, authority, task, and expressive-small group dimensions of teaching behavior. In expressive dimensions, they want teachers to make work interesting and fun. They want teachers who help them with work and care how they feel. They particularly are interested in teachers who make sure they complete written assignments and try to explain the work another way when the class doesn't understand. They want right answers to old work before new work is given. They indicate they like and do have small group work sessions in class.

The pupil expressions for teaching dimensions of learning behavior seem to indicate their needs. They want expressive-helping teachers but teachers with authority requirements for getting work accomplished, and "fair" task assignments of new work after old work is learned. Pupils need to be more involved in planning and evaluation of work and given more opportunity for small group participations.

Part II of the research is presented in three sections: 1) Section One- Value Preferences Compared as assessed by the A.J. Schwartz Values' Instrument, 2) Section Two - Concepts of Indian Culture, also assessed by the Schwartz Values' Instrument, and 3) Section Three - An Evaluation of A Course for Teachers in Indian Education Offered by the Department of Educational Foundations, The University of Calgary and assessed by a free response inventory of each class session. Important considerations are presented by reference to section findings and recommendations.

1. Section One - Value Preferences Compared.

1.1 Seven out of twelve categorical value difference are noticeable between Indian and non-Indian pupils.

- i) Indian children demonstrate less faith in human nature than do non-Indian children.
- ii) Indian children indicate significantly less interest than non-Indian children in futuristic planning and expectations.
- iii) Indian pupils demonstrate a greater degree of independence from peers than do their non-Indian counterparts.
- iv) Indian students indicate less faith in education as instrumental to later success than non-Indian children.
- v) Indian children hold more to family authority than non-Indians.
- vi) Indian pupils indicate a strong faith in occupational rewards as opposed to non-Indians.
- vii) Indian pupils exhibit significantly less self-esteem than do non-Indian pupils.

1.2 Value preferences of Indian pupils in integrated and non-integrated classrooms vary.

- i) Non-integrated pupils demonstrate less faith in human nature than integrated youngsters.
- ii) Non-integrated pupils indicate less tendency to comply with school expectations than integrated pupils.
- iii) Non-integrated pupils indicate a stronger degree of concurrence with family authority than integrated pupils.

- iv) Non-integrated pupils express a higher expectation of reward in occupational values than integrated pupils.
- 1.3 Blackfoot pupils (a selected portion of the Indian sample tested) demonstrate value-preferences different from either parents or teachers.
- i) Faith in human nature. Pupils demonstrate less faith in human nature than do parents or teachers.
  - ii) Futuristic orientation. Pupils indicate less pessimism than parents, but teachers exhibit still less.
  - iii) Occupation values - reward orientation. Pupils demonstrate more faith in occupational rewards than either parents or teachers.
  - iv) Index of self-esteem. Pupils' index of self-esteem is lower than parents or teachers.
- 1.4 The Blackfoot pupil sample indicates no significant differences from teacher, but does from parents.
- i) Independence from peers. Pupils reveal less dependence on peers than parents.
  - ii) Orientation to family authority. Pupils appreciate less the authority of the family than do parents.
  - iii) Expressive orientation. Pupils exhibit more than parents.
  - iv) Index of autonomy. Pupils tend less than parents to declare autonomy in selecting friends.

Recommendations point to the need to resolve the high mistrust in human nature held by Indians, both children and parents. Because family solidarity is high in Indian communities, a greater liaison with the Indian family by schools seems necessary. A need to raise Indian self-esteem is apparent.

Integrated education is recommended as an effort to resolve cross-cultural variations. The goal should be to seek a "commonness of outlook" for the school, pupil, and home. Such a goal calls for teachers who are appraised of the Indian situation before they are given teaching assignments. Teaching for value clarity seems of utmost importance to aid pupils in learning how to formulate for themselves life pursuits, ideas, attitudes.

## 2. Section Two - Concepts of Indian Culture.

- 2.1 Concepts of Indian Culture provides insights into five aspects.
- i) The presence of specific Indian practices. Indian pupils in integrated classrooms endorse "helping other people, taking part in ceremonies, telling Indian myths, and making Indian arts and crafts." Those in non-integrated classrooms favor "talking the Indian language and ceremonies of the societies."



- ii) Indian leadership. Indian pupils in integrated classrooms indicate higher responses to questions pertaining to cooperation with band managers and respecting people who give advice than do those in non-integrated classrooms.
- iii) What Indian parents wish for their children. Indian pupils in integrated classrooms indicate a slightly higher endorsement of "being Indian" than do those in non-integrated classrooms.
- v) What the University may do for the Indian community. Integrated Indian pupils select "help them to understand their problems" as a predominant response. Indian pupils in non-integrated classrooms select "help them to educate their young people."

Indian parents seem to endorse two of these aspects strongly: "the helping aspect of Indian life" and "preference for speaking the Indian language."

Teachers also endorse two of the aspects strongly: "speaking the Indian language" and "respect for the chief."

Recommendations in Section Two seem to bring special attention to the concepts of "speaking the Indian language" and "respect for the chiefs." Since no indication regarding the maintenance of Indian language was given, i.e. as an answer to University involvement, it seems inconclusive what the future status of Indian languages will be; possibly they will continue to be by oral transmission.

More detailed probes are suggested for the areas tested, however Section Two is looked to as a confirmation of Section One on the matter of integrated education due to the preference indicated: "that Indian children be able to act and work with relative ease in both Indian and non-Indian worlds."

### 3. Section Three - An Evaluation of A Course for Teachers in Indian Education.

- 3.1 Section Three explains the course given to Study Group One teachers as part of the research plan.

Recommendations call for the continuance of the course as a regular part of the University's offerings and to closely coordinate the course with research efforts and field experiences. The ample opportunity provided by the course for teachers from intercultural situations to compare and discuss such work was suggested as a major goal. Further evaluation of such courses was recommended.

Part III of the research provides insights into the relations of the pupils' places in classroom group structures by use of the Lyon-Kite Structural Positionings. Also assessed were pupil interactions obtained from video-



taped and analyzed "signal" and "sign" implications.

# 1. Group Structure.

- 1.1 Structural considerations point to classroom discriminations disfavoring Indian children in integrated classrooms. Considerations from the entire research point to three apparent reasons for the discrimination: 1) pupil bias evident in the structural analysis, 2) teacher bias as evidenced in the adjective survey of teachers in the Introduction of the research, 3) parental bias "pro the Indian way of life" present in Indian parental views of Part II.

Four recommendations emerge: 1) Consideration for large enough numbers of Indian pupils per class to allow for inter-ethnic and intra-ethnic structural linkages, 2) The provision for "social teachers" so trained as to encourage positive integrated classroom environments, 3) The encouragement of better parent-school-child interrelationships through native parent representation on school boards, and 4) Encouragement for appreciation of the positive cultural contributions which native people can make.

# 2. Group Structure with Signal Interaction, First Video Analysis.

- 2.1 The pupils, as a whole, both Indian and non-Indian, having higher external and internal structural system signal interactions, seem to initiate more signal interactions to non-Indian peers than do children with lower esteem in the structural systems. The larger number of non-Indian children per integrated class may have affected this finding.
- 2.2 Children who are higher in structural position tend to initiate low signal action to the teacher, and those lower in structural position seem to initiate higher signal action to the teacher.
- 2.3 Children in the external systems of the classroom, who are more stable in their structural positions, tend to receive more action from their teachers than do those who are downward or upward in structural mobility.
- 2.4 Pupils who are upwardly mobile or stable structurally tend to receive less total action from classmates. Those who are downwardly mobile seem to receive slightly more action from their peers.

# 3. Signal Interactions (First Video Analysis) with Ethnicity.

- 3.1 Indian pupils tend to talk to Indian peers and non-Indian pupils talk with non-Indian peers.
- 3.2 Indian pupils in integrated classes tend to initiate and

receive less action from Indian peers; but then, there were less of them present to talk with. Indian pupils in integrated classes also tend to less positive socio-emotional behavior.

4. Sign Interactions (Second Video Analysis) with Ethnicity.

- 4.1 Indian pupils in integrated classrooms reveal a higher level of elaborated code usage than do Indian pupils in non-integrated classrooms, although all seem to fall below the abilities of non-Indian pupils.

5. Written Sign Elaborated and Restricted Code Indications as Answers to Story Stem (Second Video Analysis) and Ethnicity.

- 5.1 Ethnic differences in written elaborated and restricted code usage of the English language also seem to be explained by integration of Indian children with non-Indian children. When integration is controlled for, the so-called "ethnic" effect disappears; that is, the effect of integration is more powerful than Indian background. (Story length was controlled for.)

Two exceptions to the above are noted: the use of simple sentences and restricted code. Here Indian background and not the effect of integration seems to cause the difference.

- 5.2 In general, non-Indian pupils also use more message units than do Indian pupils.

6. Picture Inferences as Answers to Story Stem (Second Video Analysis).

- 6.1 Increasing discrimination appears with age maturation of pupils.
- 6.2 Non-Indian pupils indicate slightly more abstract distance inferences. Indian pupils in integrated classes seem to agree with this trend.
- 6.3 Indian pupils in both integrated and non-integrated classes tend to show strong determination, ability for elaborated reasoning regarding time, and what was considered to be semi-abstract distance reasoning.

Answers to structure and interaction probes indicate that Indian children should be included with children of other ethnic origins to gain better English language elaborated code reasonings and interaction abilities.

Remedies for group structure discriminations against Indian children in integrated classrooms should be given special attention by inclusion of more native children per classroom and a study of the optimum numbers allotted to each classroom to provide for better ethnic and inter-ethnic social success.

Teacher considerations for upwardly and downwardly mobile children as well as those who appear to be structurally stable should bring about more positive social classroom climates. Special consideration of children lower in structural positions seems necessary.

Training of teachers of native children should include special emphasis upon techniques for positive social interactions. Such techniques should include not only improved ways of helping them with elaborated code usage but group structural analysis and positive inter-ethnic and intra-ethnic group dynamics procedures.

Further study to gain more understandings of the relationships between elaborated code abilities and social success for children seems necessary.

Part IV of the research gives a report upon the intelligence, aptitudes, and academic achievement of the pupils. Pupils were tested with the Lorge Thorndike Intelligence Test, the Safran Culturally Reduced Intelligence Test, the Ravens Progressive Matrices, and various sub-sections of the Canadian Test of Basic Skills. Grade VII pupil findings are reported upon.

#### 1. Achievement.

- 1.1 Indian children do less well in school related tasks than do non-Indians. There is no reason to believe from the data that Indian pupils as a whole perform relatively better in any particular achievement area.
- 1.2 No apparent advantage appears to accrue from using so-called culturally-reduced or culture-fair tests of intelligence.
- 1.3 Indian males seem able to achieve as well as non-Indian males on mechanical aspects of language skills: Spelling and Usage subtests.
- 1.4 In non-mechanical skill areas such as Vocabulary, Reading Comprehension, and Ability measures, the Indian females performed more poorly than did Indian males. The only exception is in the area of Mathematics Concepts, and Mathematics Problem Solving, where the difference was not significant.
- 1.5 Non-Indian females outperform non-Indian males in all cases except on the Mathematics tests.

## 2. Ability and Achievement.

- 2.1 Indian Males. In intercorrelations of the four intelligence measures: SCRIT, RPM, LThV, and LThNV, SCRIT is probably the most useful. As it is still a weak predictor, a more useful one may be Reading Comprehension or even Vocabulary.
- 2.2 Non-Indian Males. Intercorrelations indicate that apparently ability measures which relate to school-like tasks are better predictors for those tasks. The highest correlations between ability and achievement were obtained for LThV and LThNV.
- 2.3 Indian Females. No measure used in the study consistently correlated with the others. The highest average correlation between ability and achievement appeared to be that for LThV. It seems once again that subtests of the CTBS Battery can be used to predict performance almost as well as ability tests.
- 2.4 Non-Indian Females. One measure of ability seems about as good as another in terms of predicting achievement. Vocabulary and Reading Comprehension may be the more efficient academic predictors.

## 3. Multiple Regression Findings re Achievement Prediction.

- 3.1 For the Indian population, Reading Comprehension and Vocabulary seem to produce the best results in prediction of achievement.
- 3.2 For non-Indian subjects, again achievement measures seem to perform prediction functions more adequately than do IQ scores.

Answers to Part IV specific probe: that of making a start toward selecting tests which might better predict achievement than those currently in use indicate that standardized tests seem to leave much to be desired as predictors of achievement, especially for Indian pupils. This may be due to the selection of tests used in the study.

Low performance of Indian pupils may be due to poor test-writing skills or poor rapport with the person giving the test. This general attitudinal complex needs further investigation.

Poor performance of Indian females may be due to cultural differences which discriminate against the female. Secondary analysis of the data with that of self concept data reported upon by Dr. R. L. Hertzog might provide further information in this regard.

Teacher attitudes may affect the poorer performance of Indian females. They may hold different expectations for Indian males,

e.g. preparation of Indian males for the job market. Secondary analysis with data presented by Dr. L.C. Lyon and Dr. J.W. Friesen may help to confirm such an hypothesis.

Further data needs to be collected before a firm hypothesis can be established.

Further research indications include:

1. Development of effective predictors of school achievement directed at areas where Indian pupils show specific strengths.
2. Cross-sectional or longitudinal study of Indian groups within various geographical areas to provide information re stages where attitudes, motivational complexes and situations begin to diverge.
3. Secondary analyses for relationships between achievement and motivation, aspiration, self-perception, attitude, teacher perception, etc. to provide information re an hypothesis that achievement depends upon expectations people hold for themselves and upon the expectations held for them by others.

All the views expressed indicate the need for a rather extensive program of intervention. It is proposed that a selected team of researchers and teachers work in one specific location (a demonstration unit) over a period of time, concentrating on setting objectives, criteria to measure achievement of objectives, attempting to alter self-concepts and motivational patterns, etc. with a basic study of reinforcement contingencies.

Part V of the study provides study of pupil aspirations and concepts of reality. The task of this portion of the research was three-fold: 1) whether Indian and non-Indian adolescents are dissimilar with regard to vocational aspiration, 2) whether there are dissimilarities between Indian and non-Indian adolescents with regard to self perceptions; and 3) whether the kinds of support behaviors for vocational aspiration and self perception in Indian and non-Indian adolescents differ. Instruments used included: The Survey of Study Habits and Attitudes, an Occupational Scale, a Self-Concept Scale, The Safran Vocational Interest Test, Aberdeen Inventory, Rosen Scale, Buxton Scale, and Semantic Differential. Because of the complexity, no detailed analysis of the Semantic Differential



is included in the report. Although emphasis is upon Grade Seven, Grades Eight and Nine are included in the sample results where possible.

1. Vocational Aspiration and Self Concept.

- 1.1 No significant differences appear between Indian and non-Indian pupils for perceived level of vocational aspirations and actual self concept.
- 1.2 A significant difference exists for the two groups with reference to ideal self concept, with the non-Indian group scoring higher. The variability of the Indian group is considerably higher.
- 1.3 With respect to academic behaviors to support these aspirations, non-Indians score significantly higher than the Indians. The same hold, in the main, for the internalization of the support motives and values associated with achievement which make attainment more probable.
- 1.4 On the interest scales, the two groups seem to indicate similar interests. The non-Indians prefer vocations which require specialized training or additional post-high school education. Since this group also has the requisite support behaviors and motives, attainment is feasible. The Indians also emphasize vocational interests which require specialized training or education, but the absence of the significant support behaviors makes attainment of these goals doubtful.
- 1.5 When Grade Seven groups were divided into males and females, approximate results were obtained. The major conclusion seems to be that the Indian males are more congruent with the non-Indian males than are Indian females with non-Indian females. The Indian females appear to exhibit more conflict than do their male counterparts.

2. Comprehensive View Tabular Analysis.

- 2.1 All Grade Seven groups perceive themselves to possess the academic support behaviors to the same extent. In this regard, all students consider themselves to be equally academically oriented. With regard to ideal self, the Indian males aspire minimally to an academic orientation while the Indian females reject this aspect of self image rather strongly.
- 2.2 Vocational aspiration is strongly associated with academic orientation in the non-Indian group but only minimally associated in the Indian group. For achievement ethic orientation, the averages are in the same direction for all groups, but the Indian females appear to be more



minimally oriented than do the Indian males.

- 2.3 Actual self seems to be associated with achievement motivation to the same extent across all groups. Apparently all students perceive themselves to be motivated to achieve to the same degree. As for ideal self, there seems to be minimal association with achievement motivation across all groups. It appears that the Indian culture does not support this motive, while the opposite is the case for non-Indians.

### 3. In General.

- 3.1 The cultural basis of Indian students has differential effects upon males and females.
- 3.2 Although Indian students appear to reject the achievement ethic, which stresses the possibility and necessity of improving status, of planning to insure future gains, and acquiring independence of family ties, they do appear to have accepted the value of academic orientation.
- 3.3 Self concept ratings lead to the conclusion that the Indians perceive themselves as having learned academic behaviors and achievement motives to the same extent as their non-Indian peers.
- 3.4 In terms of what they would like to be, this orientation is rejected by Indian females and tolerated or minimally accepted by the males.
- 3.5 While Indian students perceive level of aspiration as comparable to that of non-Indians, it does not appear to be supported by the necessary behaviors and motives, as is the case of the non-Indian students. The evidence suggests that the Indians accept some aspects of education while rejecting others, with this trend more pronounced among the Indian females.

Implications indicate that motivation by itself is a necessary but not sufficient requirement for success. A logical conclusion would be that of a secondary analysis of the data, particularly with that of Dr. W.R. Unruh, which would allow convergence and divergence between basic skills and abilities and motivation, values, and self-image.

It seems the focus of study should now be upon intra-Indian analyses, as by now it is established that Indian and non-Indian differences do exist. This probably would require more intensive testing of individual Indian students to determine areas of competence and weakness. Such would allow for development of individualized programmed interventions. It seems inadvisable

to treat the Indians as a group. The high variability suggests differential considerations.

It is apparent Indian males are coping more adequately with educational demands than are Indian females. Individualized programs and engineered socialization should aid both.

The data indicates Indians are not too dissimilar from non-Indians in aspirations. Their support behaviors do seem inadequate to meet their aspirational demands. It would seem feasible to investigate the reinforcement contingencies that aid in development of motives and academic behavior which would facilitate attainment.

Intensive individual and group counselling intervention programs integrated with the individual's program, could be beneficial.

The deficiencies of Indians seem to have strong cultural bases. Greater attention to the social climate and organization of the school should be paid in order to develop the necessary attitudes, values, motives, and behaviors necessary for success.

### The Secondary Models

The secondary models provided in the Introduction to Parts I and II give conjectures regarding Indian vs. non-Indian pupil interperson-perceptions. The models were based for the most part upon results of the teacher adjective survey, also in the Introduction. It seems possible now to assess the models briefly. Proceeding clockwise from the area marked "Morale," it may be contended that:

1. Morale. Indian pupils do not present suspicious, resentful morale perceptions while non-Indians are eager and enthusiastic, at least according to the index used in this study. Peer morale seems high for both groups, Indians and non-Indians; however, both show some school and teacher morale anxieties. Further testing using specific resentment indexes may provide more information in this regard.
2. Place in Group Structure. Indian pupils do seem to be handicapped in group structure placement, particularly in integrated classrooms. A higher percentage of their ethnic peers allotted to such classrooms may alleviate this. Non-Indian pupils do seem to be better placed structurally. There seems to be some connection between successful use of elaborated code and group placement achievement.

3. Aspirations. Indian pupils are not too dissimilar from non-Indians in aspirations but seem to lack adequate support behaviors to adequately meet aspirational demands.
4. Values. Indian pupils seem to hold more distrust and less self-esteem, less interest in futuristic planning, less faith in education as an instrument for later success, and expectations than non-Indians. Such value discrepancies may account for their lesser aggressive tendencies. Further testing seems needed.
5. Intelligence and Attitudes. The focus of Part IV of the research was more upon achievement and the finding of adequate predictors of academic success. Reading Comprehension and Language indexes seem perhaps better predictors than IQ tests by which to assess Indian pupil academic success. Indian pupils did show lower achievement performance.
6. Social Achievement. Indian pupils indicate a consummatory-liking set of "key" perceptions, while non-Indian pupils seem oriented to work success social achievement orientations. Indian pupils in integrated classrooms seem more inclined to agree with non-Indian perceptions.
7. Interaction. Indian pupils do appear to be handicapped by their ability to use elaborated English language code. Some home background handicaps are apparent in written expressions as simple sentence and restricted code usage. Indian pupils in integrated classes appear to be less handicapped. Non-Indian pupils do reveal more positive interactions.
8. Concept of Reality. No significant difference was found between Indian and non-Indian perceived actual self concept. A significant difference was found for the two groups with reference to ideal self concept with non-Indians scoring higher. Variability of the Indian group was higher. Non-Indian pupils, due to more adequate internalization of support motives and values associated with achievement, seem to be able to realize more attainment.
9. Teaching Dimensions. Both Indian and non-Indian pupils want expressive teaching behaviors, authority requirements of teachers about task completions, and help in realizing learning of old work before new work is given. Pupils need more involvement in planning and evaluation of their work.
10. Academic Achievement. Indian pupils do show lower academic achievement than do non-Indian pupils. This is particularly true for Indian females. No specific test was given for "being industrious" or "careless." Secondary analysis of the data with other parts of the research was suggested. Also suggested was an extensive program of intervention to help Indian pupils.

The focus of the entire study points to the need for further research with special attention to pilot program interventions to aid Indian pupils which range from cross-sectional study of geographical groups to longitudinal studies of specific units where cooperation of teachers, parents, and researchers may be realized. Secondary analyses of the data here presented also are recommended.

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