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A Study of the Effects of an Occupational Unit on the Vocational Development of Indian High School Students

Shirley F. Jensen

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A STUDY OF THE EFFECTS OF AN OCCUPATIONAL UNIT ON THE VOCATIONAL DEVELOPMENT OF INDIAN HIGH SCHOOL STUDENTS

BY

SHIRLEY F. JENSEN

A thesis submitted in partial fulfillment of the requirements for the degree Master of Science, Major in Guidance and Counseling South Dakota State University 1967
A STUDY OF THE EFFECTS OF AN OCCUPATIONAL UNIT
ON THE VOCATIONAL DEVELOPMENT OF
INDIAN HIGH SCHOOL STUDENTS

This thesis is approved as a creditable and independent investigation by a candidate for the degree, Master of Science, and is acceptable as meeting the thesis requirements for this degree, but without implying that the conclusions reached by the candidate are necessarily the conclusions of the major department.

(Thesis Adviser)

(Head, Guidance and Counseling Department)
ACKNOWLEDGEMENTS

The writer wishes to express her sincere appreciation to Dr. Orville A. Schmieding for his interest, assistance and guidance in the preparation of this thesis.

The cooperation by the administration of the Flandreau Indian School is gratefully acknowledged, particularly the assistance of Mr. Stern, Academic Head.

Finally, appreciation is extended to my husband whose moral support and confidence served to sustain my efforts during the course of this investigation.

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Description of the School</td>
<td>1</td>
</tr>
<tr>
<td>Importance of the Study</td>
<td>2</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>4</td>
</tr>
<tr>
<td>II. REVIEW OF LITERATURE</td>
<td>5</td>
</tr>
<tr>
<td>Vocational Development</td>
<td>5</td>
</tr>
<tr>
<td>Vocational Maturity</td>
<td>7</td>
</tr>
<tr>
<td>The Task of Measurement</td>
<td>8</td>
</tr>
<tr>
<td>The Function of Occupational Information</td>
<td>10</td>
</tr>
<tr>
<td>Review of Related Research On Occupational Courses</td>
<td>12</td>
</tr>
<tr>
<td>Summary</td>
<td>15</td>
</tr>
<tr>
<td>III. PROCEDURES</td>
<td>17</td>
</tr>
<tr>
<td>Population and Sample</td>
<td>17</td>
</tr>
<tr>
<td>Description of Class Procedure</td>
<td>18</td>
</tr>
<tr>
<td>Measures Utilized In This Investigation</td>
<td>20</td>
</tr>
<tr>
<td>Statistical Procedures</td>
<td>25</td>
</tr>
<tr>
<td>Hypotheses to be Tested</td>
<td>25</td>
</tr>
<tr>
<td>IV. FINDINGS</td>
<td>27</td>
</tr>
<tr>
<td>Discussion of Results</td>
<td>32</td>
</tr>
<tr>
<td>Concomitant Results</td>
<td>34</td>
</tr>
<tr>
<td>CHAPTER</td>
<td>PAGE</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>V. SUMMARY AND CONCLUSIONS</td>
<td>35</td>
</tr>
<tr>
<td>Summary</td>
<td>35</td>
</tr>
<tr>
<td>Conclusions</td>
<td>36</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>37</td>
</tr>
<tr>
<td>Recommendations</td>
<td>37</td>
</tr>
<tr>
<td>SELECTED REFERENCES</td>
<td>39</td>
</tr>
<tr>
<td>APPENDIX A - Occupational Outline</td>
<td>43</td>
</tr>
<tr>
<td>APPENDIX B - Tests</td>
<td>50</td>
</tr>
<tr>
<td>Appendix C - Letters</td>
<td>57</td>
</tr>
</tbody>
</table>
### LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>Description</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Description of Subjects</td>
<td>17</td>
</tr>
<tr>
<td>2.</td>
<td>Comparison of Vocational Development Inventory Scores: Experimental and Control Groups</td>
<td>27</td>
</tr>
<tr>
<td>3.</td>
<td>Comparison of Vocational Development Inventory Scores: Experimental and Comparison Groups</td>
<td>28</td>
</tr>
<tr>
<td>4.</td>
<td>Comparison of Vocational Development Inventory Scores: Control and Comparison Groups</td>
<td>29</td>
</tr>
<tr>
<td>5.</td>
<td>Comparison of Vocational Tenacity Test Scores: Experimental and Control Groups</td>
<td>30</td>
</tr>
<tr>
<td>6.</td>
<td>Comparison of Vocational Tenacity Test Scores: Experimental and Comparison Groups</td>
<td>30</td>
</tr>
<tr>
<td>7.</td>
<td>Comparison of Vocational Tenacity Test Scores: Control and Comparison Groups</td>
<td>31</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Description of the School

The Flandreau Indian High School had its origin as an Indian Mission School in 1871, at Flandreau, South Dakota. Following the purchase of the property by the United States government in 1883, the institution became a boarding school with an initial student body of ninety-eight Indian students. Gradually, the school has developed and expanded its physical facilities until today there are approximately 600 students in grades 9-12 attending the Flandreau Indian High School. The school draws its enrollment from a five state area: Montana, Wyoming, North Dakota, South Dakota, and Nebraska. The students live in the dormitories on campus and return home at the end of the school year, late in May.

Students desiring to enroll at the Flandreau Indian High School must be of one-fourth or more degree Indian blood and must meet one or more of the criteria listed below (Bureau of Indian Affairs Memorandum, 1964).

A. Education Criteria

1. Those for whom a public or Federal day school is not available. Walking distance to school or bus is defined as one mile for elementary children and 1-1/2 miles for high school.

2. Those who need special vocational or preparatory courses, not available to them locally, to fit them for gainful employment.
3. Those retarded scholastically three or more years or those having pronounced bilingual difficulties, for whom no provision is made in available schools.

B. Social Criteria

1. Those who are rejected or neglected for whom no suitable plan can be made.

2. Those who belong to large families with no suitable home and whose separation from each other is undesirable.

3. Those whose behavior problems are too difficult for solution by their families or through existing community facilities and who can benefit from the controlled environment of boarding school without harming other children.

4. Those whose health or proper care is jeopardized by illness of other members of the household.

Importance of the Study

As our society becomes more complex and specialized, there is an increased demand in the labor force for people with specialized skills and more education. Those without some type of post high-school training or education are seriously handicapped in securing steady profitable employment. National attention is being directed to the critical social and educational needs of youth from economically depressed environments to negate the problem of wasted manpower. Both President Kennedy and President Johnson, in their annual manpower reports, have singled out for special attention problems affecting the difficulties which the uneducated, the unskilled, and the poor face in getting and holding jobs. The poverty program's Neighborhood Youth Corps, Work Experience, and related measures already provide jobs and
training for some 400,000 youths and adult poor, at an annual cost of 
more than a billion dollars (Levitan & Mangum, 1966, p. 46).

The majority of the students at the Flandreau Indian High 
School come from economically depressed areas where major barriers to 
development confront them because of unstable home environments, insuf-
ficient family income, and other adverse factors. Such students are 
feeled to lack information about the occupational world. In discussing 
Indian students who attend college, Hildegard Thompson (1966, p. 4), 
Former Chief, Branch of Education, Bureau of Indian Affairs, comments 
that:

Most important of all they need to know more than they now do 
about twentieth century career opportunities. Indian students 
know little about such things as these until they get on campus. 
Other articles have also pointed out that Indian students need help in 
developing career plans (Coombs, 1966; Thompson, 1964).

Indian Students need such help because of their limited oppor-
tunities on the reservation to associate with people of diverse back-
grounds. In addition, their parents generally have a limited education 
and a minimal knowledge of various occupations and the general trends 
of the vocational world. Unemployment among reservation Indians is an 
estimated 46 percent, while on some reservations the figure is closer 
to 90 percent (Selover, 1967, p. 6). Ginzberg (1967, p. 797) observes: 
"We have been learning of late that the children of the hard-to-employ 
are usually seriously handicapped for employment." Consequently, the 
reservation parents cannot help their children explore available oppor-
tunities as readily as parents of a higher socio-economic level.
Therefore some type of vocational encouragement must come from the Indian school. For as Robert Hoppock (1963, p. 5) points out:

One cannot choose what one does not know, and many occupations are unknown to most of us. One may stumble into an appropriate occupation by sheer luck, but the wise choice of an occupation requires accurate information about what occupations are available, what they require, and what they offer.

One of the methods to help students acquire more accurate information is by means of an occupational class. If an occupational class would affect the vocational maturity of the Indian students in a positive direction, such results would have important implications for Indian schools. An occupational class could provide a method for the schools to aid their students in making wiser vocational choices.

**Statement of the Problem**

The objective of this investigation has been to assess the effects of an occupational unit on the vocational development of Indian high school students. Specifically, the research will seek to answer the following questions:

1. Will an occupational unit affect the vocational development of Indian high school students as measured by the Vocational Development Inventory?
2. How will Indian students compare to public high school students in vocational development as measured by the Vocational Development Inventory?
3. Will an occupational unit affect the vocational tenacity of Indian high school students as measured by the Vocational Tenacity Test?
4. How will Indian students compare to public high school students in vocational tenacity as measured by the Vocational Tenacity Test?
CHAPTER II

REVIEW OF LITERATURE

Chapter II of this investigation is a review of the conceptual formulation of vocational development and theory. The relevance of occupational information to vocational development will be explored. In addition, related research will be considered as it pertains to the resultant effects of occupational information classes.

Vocational Development

In the last fifteen years, the various theories of vocational choice have been thoroughly scrutinized, some found deficient, and several revisions or new ones have been considered. The search for a more adequate understanding of vocational choice was necessitated by the increased demands of a rapidly expanding society with greater geographical and occupational mobility. Former theories have been described as "static", or as a "trait-measurement model," based as they were on the outmoded assumption that an individual's choice of occupation was lasting (Borow, 1960).

It remained for Eli Ginzberg and associates (1951, p. 23) to explicitly denote that counselors lacked an adequate theory of vocational choice. They went on to evolve a developmentally oriented theory to analyze the process of occupational decision-making. Ginzberg and associates defined three periods of occupational choice determination: (1) fantasy choice, (2) tentative choice, and (3)
realistic choice, which form the framework of their three-period theory.

The term "vocational choice" was rejected by Donald Super, who felt that the use of the term suggested the feeling of an event, of a single decision made in the life of an individual. In reference to "choice," Super (1956, p. 249) states:

The impression left was that at some moment in his life an individual chooses an occupation, after which he prepares for, enters, and then adjusts to it... the use of the term "vocational development" avoids giving this impression of instantaneousness, and points up the unfolding, developmental nature of the vocational choice and adjustment process.

Thus, emerged a changed emphasis from the concept of "choice" as a single act to that of a developmental sequence.

Super elaborated further on the concept of vocational development which he related to general developmental psychology.

Just as general development can be broken down into major life stages placed sequentially on a continuum, each stage having characteristics which are peculiar to it and which justify singling it out, so the continuum of vocational development can be broken down into vocational life stages, each defined by its peculiar characteristics (Super, 1957, p. 185).

Buhler's life stages were incorporated by Super (1953) to serve as the framework for his conception of vocational development. The five life stages are classified as the (1) growth stage (birth to 14 years); (2) exploration stage (15 to 24); (3) establishment stage (24 to 44); (4) maintenance stage (45 to 64); and (5) the decline stage (65 on). Most in turn are subdivided.

Indeed, the influence of Donald Super has been pronounced on vocational development theory when one considers the quality and
quantity of literature produced. However, in discussing a certain aspect of vocational development, LoCascio (1964) warns that continual emphasis of the continuity and progression of vocational development may result in the neglect of delayed and impaired vocational development. He conceives delayed development as inadequate vocationally relevant behavior and impaired development as unsuccessful vocational behavior.

Vocational Maturity

In discussing a basis for measuring vocational development, Super (1955, p. 153) defines vocational maturity as "... the place reached on the continuum of vocational development from exploration to decline." He, then, defined and clarified five dimensions and related indices along which the vocational behavior of adolescents might mature. They are as follows:

1. Orientation to vocational choice.
   Index: Concern with choice.
2. Information and planning.
   Index: Extent of planning.
3. Consistency of vocational preferences.
   Index: Stability of preferences.
4. Crystallization of traits.
   Index: Degree of patterning of measured interests.
5. Wisdom of vocational preferences.
   Index: Relationship between abilities and preferences.

In reference to Super's above dimensions, Crites (1965, p. 4) observes that the concept of vocational maturity includes "attitudes toward decision-making, comprehension and understanding of job
requirements, planning activity and ability, and development of vocational capabilities."

Crites (1961, p. 259) offers two conceptions of vocational maturity. The first is "degree of vocational development", defined as "... the maturity of an individual's vocational behavior and that of the oldest individuals in his vocational life stage." The second is the "rate of vocational development" which "... refers to the maturity of an individual's vocational behavior in comparison with that of his own age group."

The Task of Measurement

Few measures of vocational maturity have been devised, and those that have, are considered to be inadequate or in need of more research (Crites, 1965).

In a study designed to determine the existence of a relationship between vocational maturity and the outcomes of counseling, Nelson (1956) classified subjects either as vocationally mature or immature. A client classified as mature was defined operationally as one whose professed interests harmonized with his inventoried interests and aptitudes. Conversely, an immature client was defined as one who expressed either no interests or whose expressed interests were dissonant with his inventoried interests or test aptitudes. As Nelson points out, the specific definition of vocational maturity utilized in his study, defined as "maturity of vocational interests," is related to one of Super's dimensions, "wisdom of vocational preferences".
Another approach for measuring vocational maturity was devised by Dilley (1965). He analyzed Super's indices of vocational maturity and found three that he felt involved the ability to make decisions: concern with choice, extent of planning, and acceptance of responsibility. After developing an instrument to measure decision-making ability (DMI), Dilley correlated the relationship between the scores on this instrument to three variables known to be related to vocational maturity: intelligence, achievement, and participation in extracurricular activities. The test scores and variables correlated positively and Dilley concluded that a relationship between vocational maturity and decision-making ability exists and therefore could be used as an indication of vocational maturity.

A more comprehensive measure of vocational maturity has been developed by John O. Crites, the Vocational Development Inventory (VDI). The VDI consists of two parts, the Attitude Scale and the Competence Test. These parts are designed to assess respectively the attitude and aptitude dimensions of vocational development (Crites, 1964). The Attitude Scale was:

designed to elicit the attitudinal or dispositional response tendencies in vocational maturity which are non-intellective in nature, but which may mediate between both choice behaviors and choice aptitudes (Crites, 1965, p. 7).

The Competence test involves measuring the comprehension and problem-solving abilities as they pertain to the vocational choice process. However, the Competence Test is in the initial stages of development. Discussion thus will be centered on the Attitude Scale, the measure used in this investigation.
In regard to vocational development, Crites (1965, p. 6) affirms that any device which measures a developmental variable must have scores either which increase or decrease with age to some degree but not correlate completely because certain behaviors may mature only at given times under given conditions. The Attitude Scale seems to fulfill this function, for data indicate that the Scale measures behaviors which are positively enough correlated with age and grade to be considered developmental, but not so highly correlated as to be considered the same as age and grade.

Crites (1965, p. 29) established operational definitions for his two conceptions of vocational maturity, "degree of vocational development" and "rate of vocational development" in relation to the Attitude Scale. The "degree of vocational development" is defined as the total raw score on the Attitude Scale, based upon the average responses of twelfth graders, or the similarity of the individual's behavior to that of the most advanced group in his life stage. The percentile norms for each grade level are defined as "rate of vocational development," or the maturity of an individual's vocational behavior relative to that of his peers.

The Function of Occupational Information

Occupational information has been variously defined in broad general terms. Shartle (1959) conceives occupational information as primarily information about the environment. Hoppock (1963, p. 7) considers it "... any and all kinds of information regarding any
position, job, or occupation, provided only that the information is potentially useful to a person who is choosing an occupation." In further clarification, Hoppock indicates that an individual must have self-knowledge to some degree before knowledge of occupations can be effectively applied.

Relating occupational information to the process of selective perception, Baer notes, that only part of the stimuli to which a person is exposed elicits a reaction. He goes on to say: "Occupational experience can be defined as experiences with the worlds of work and education that provoke reaction. Occupational information can be a part of such dynamic experiences (1964, p. 12)."

It is evident that occupational information can be considered as a part of one's total vocational experiences, a planned and structured part. There is no guarantee that an individual's total experiences will be sufficient for wise vocational planning. Indeed cultural, geographical, and economic factors can curtail an individual's awareness of vocational opportunities. Certainly, this is true for disadvantaged groups such as school dropouts, poorly educated negroes, (reservation Indians) or isolated farm families (Ginzberg, 1967, p. 797). However, occupational information classes can insure, at least, exposure to this one facet of vocational experiences to many students.

Realizing that vocational choice is a developmental process, many investigations are being made to determine the effect of early presentation of occupational information and to determine the kinds of materials appropriate for different stages of development. Sinick,
Gorman, and Hoppock report:

The research indicates that early presentation of occupational information may facilitate such developmental factors as understanding of occupational concepts, identification of vocational interests, realism of self-concept, appropriateness of vocational choice . . . " (1966, p. 591)

One of the five basic guidelines outlined by the National Vocational Guidance Association (1964, p. 221) in regard to occupational information is as follows: "Occupational information should be related to developmental levels which will vary with age, educational attainment, social, and economic backgrounds."

Practically speaking, Robert Hoppock (1963, p. 171) denotes: "The appropriate time to teach occupations is, therefore, just before or at the time that large enough numbers of persons will need . . . occupational information . . . " Hoppock favors one semester or year courses placed at strategic points.

Baer (1964, p. 402) views an occupations curriculum as "a spiraling series of experiences in self-study and explorations into work and educational roles." He bases this on the assumption that young children can understand certain concepts which can be progressively developed and expanded at subsequent life stages.

Review of Related Research on Occupational Courses

A number of studies have been conducted concerning the outcomes or effectiveness of occupational classes or units. Generally, criterion measures utilized in determining the results of such classes have included tests of occupational knowledge, student reactions,
appropriateness of vocational choice, comparison of measured interests to expressed interests, job satisfaction, and/or earnings. To the best of the writer's knowledge, no other investigations of the effectiveness of an occupational class or unit, have employed the criterion measure of vocational development, per se, as was attempted in the present investigation.

Toporowski (1961) attempted to determine if students would develop a better basis for selecting vocations after participating in an occupational unit. The sample included 150 non-academic high school seniors. Another 150 students matched on teacher grade, course number, and Otis intelligence served as the control group. The experimental population, divided into three groups, received the benefit of an intensive eleven-lesson unit on occupations by three social studies teachers. At the beginning and end of the experimental period, both groups completed the California Occupational Interest Inventory and an original Occupational Information Survey, a questionnaire on occupational information and plans for the future. A follow-up six months later, following graduation, determined that the experimental group was significantly more independent in job choice and that more were employed and satisfied with their jobs than the control group. The earnings per month were also significantly higher for the experimental group as compared to the control. Based on his findings, Toporowski concluded that a short-term intensified unit on occupational information does help students develop a better basis for selecting occupations. Rosengarten (1963) also established that students exposed to
occupational activities in high school obtained significantly higher mean earnings than a control group.

A study using a procedure somewhat similar to the present study, but utilizing a different criterion measure is one by Ryan (1964). He attempted to evaluate the effect of a nine week group guidance class on the self-concept of eighth graders in junior high school. Vocational and educational information was presented, an aptitude test and interest inventory taken, and group problems discussed. No significant differences were found between the control and experimental groups with regard to change in realistic self-concept, as measured by the Butler-Haigh Q-Sort. In conclusion, Ryan questioned whether the self-concept could be significantly changed over a nine week time period.

Another study dealing with an occupational unit conducted by Walker (1956) endeavored to determine the effect of occupational instruction and self-appraisal activities upon the vocational preferences, interests, and attitudes of high school girls. The class met for a period of eight weeks, five days per week, forty minutes per day. Included in the instruction for the experimental group was twenty films on occupations, teacher lectures, class discussion, and group and individual interpretation of test results. Occupational reading and interviews with workers were optional. Before and after the experimental period, both groups took the Kuder Preference Record and a questionnaire asking for the three vocations most preferred, three least preferred, and degree of certainty regarding their first choice. Results indicated that significantly more of the experimental group changed their first,
second, and third choices and gained in certainty of vocational choice. Ninety-seven per cent of the students felt that the course should become a part of the curriculum.

Biersdorf (1958), DeVault (1963), and Leonard (1961) employed appropriateness of vocational choice as a criterion to assess the influence of occupational units and Payne (1959) utilized change of measured interests. Biersdorf found one significant difference out of five criteria and concluded that the effectiveness of group guidance has been over-estimated. DeVault and Payne both found significant differences in favor of the experimental groups. Leonard used no statistical analysis, but considered his results satisfactory enough to warrant an occupational course.

**Summary**

The developmental aspects of vocational behavior have been emphasized in the past fifteen years, resulting in the conception of "vocational development" as opposed to "vocational choice." "Vocational choice," failed to adequately convey the idea of vocational behavior as a lifelong process rather than as a solitary event. Vocational development implies a continuum and "vocational maturity" is depicted as a point on this continuum expressing the degree of development attained by an individual. Three measures of vocational maturity were reviewed and their inadequacies noted, including Crites' VDI, the measure utilized in this investigation.

A discussion of various definitions of occupational information
served to indicate its function in the developmental sequence. Finally, a review of research, concerning the effectiveness of occupational courses, pointed out that findings seemed to vary depending upon the criterion measure utilized in the investigations.
CHAPTER III

PROCEDURES

This chapter will present information on the methods of classification and analysis of data pertinent to the investigation.

Population and Sample

The subjects for this investigation included an experimental group of thirty-nine junior and senior students from the Flandreau Indian High School and a control group, also consisting of thirty-nine junior and senior students from the Flandreau Indian High School. For a comparison group, thirty-nine junior and senior students were selected from a non-Indian public high school located in a small South Dakota community.

Additional descriptive data regarding each group is presented in Table 1.

Table 1. Description of Subjects

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<th>Number by Grade Level</th>
<th>Number by Sex</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Juniors</td>
<td>Seniors</td>
</tr>
<tr>
<td>Indian Experimental</td>
<td>17.7</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>Indian Control</td>
<td>17.7</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>Public Comparison</td>
<td>17.6</td>
<td>13</td>
<td>26</td>
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</table>

The selection of subjects for the investigation was accomplished
in the following manner. Junior and senior Indian students from two randomly selected study halls were asked to participate in the occupational-educational unit. The students were informed of the general nature of the unit, as to time and content. They were then given the choice of participating by indicating on a sheet of paper their individual preference. Forty-six of the fifty-nine study hall students indicated their desire to participate and became the experimental group. However, seven students returned home during this time leaving a total of thirty-nine in the experimental group.

At the end of the treatment period a control group consisting of junior and senior Indian students from two other study halls was randomly selected. A third group, for comparison, was randomly obtained from a junior-senior study hall at a public high school.

Description of Class Procedure

The occupational classes met for a total of twenty-two sessions, three times per week and were taught by a certified counselor. Each class session lasted for fifty minutes. Students in one class numbered fifteen, the other, twenty-four.

During the first session, an occupational interest survey was made of both classes to help determine course content. Most of the material for the course was based on suggestions described in Robert Hoppock's Occupational Information (1963). The class sessions followed the general topic outline listed below. For a more complete outline of activities, the reader is referred to Appendix A.
Session I. Orientation
Session II. Knowing Yourself
Session III. Self Appraisal
Session IV. Correction and Interpretation of Kuder
Session V. Interpretation of Kuder and Other Tests
Session VI. Knowing the World of Work
Session VII. Knowing the World of Work
Session VIII. Choosing an Occupation
Session IX. Library Review
Session X. Occupational Information Study
Session XI. Opportunities Especially for Indian Youth
Session XII. Adult Vocational Training and Armed Forces
Session XIII. Individual and Group Work
Session XIV. Overview of Various Jobs
Session XV. Study of Haskell Graduates
Session XVI. Individual and Group Work
Session XVII. College Information
Session XVIII. Learning to Read a College Catalogue
Session XIX. Financing a College Education
Session XX. Applying for a Job
Session XXI. Interviewing
Session XXII. Summary, Discussion, and Evaluation

The classroom lectures and discussions were supplemented with two optional field trips. One visit was made to an X-ray technician at a local hospital. The other was made to a college where the computer
and printing departments were toured. In addition, one optional group conference with an armed forces recruiter was offered during an activity period.

Following the termination of the occupational-educational unit all three groups were administered the **Vocational Development Inventory Attitude Scale, (VDI)** and the **Vocational Tenacity Test, (VTT)**.

The random sampling was considered sufficient enough to warrant the use of post testing, instead of both pre and post testing. In addition, the drop-out rate of the Indian school is such that it would have been difficult to maintain equivalent groups for testing. It was further felt that administering a pre test might have a practice effect on the scores.

**Measures Utilized in This Investigation**

In this section, the two measures utilized to assess the effects of an occupational-educational unit will be described.

**Vocational Development Inventory.** The VDI was used as a measure to determine the vocational maturity of the students in the study. Test booklets and answer sheets as well as scoring were provided gratis by the Vocational Development Project at the University of Iowa. See Appendix C.

The VDI consists of fifty attitudinal and behavioral statements each item of which is related to one of the following dimensions of vocational maturity: (1) involvement in the choice process, (2) orientation to work, (3) independence in decision-making, (4) basis
for choice that is, interests, capacities, and values, and (5) conceptions of the choice process (Crites, 1966). Illustrative of the items included in the VDI which measure the above dimensions are the following:

1. I seldom think about the job I want to enter.
2. Work is dull and unpleasant.
3. I plan to follow the line of work my parents suggest.
4. Your job is important because it determines how much you can earn.
5. There is only one occupation for each person.

The students answer the items with "true-false" responses depending upon their agreement or disagreement with the statements. Their vocational maturity score is the total number of responses made which are like those of the average responses of twelfth graders, the criterion group used in standardizing the scale. Total raw score on the test delineates the "degree of vocational development", or the similarity of the individual's vocational behavior to that of the most advanced group in his lifestage, adolescence (Crites, 1965).

A copy of the VDI and correct answers are found in Appendix B. For a general discussion of the VDI and its formulation, the reader is referred to the Review of the Literature.

Several studies have been conducted which have utilized the VDI as a measuring device (Hollender, 1964; Hall, 1963; Jessee, 1965). Many more investigations are in progress.

One study which employed the VDI is an investigation by Das (1963). He attempted to assess the changes in the vocational maturity
of a group of potential high school drop-outs both before and after counseling. The eighty-seven subjects were divided into three equal sized groups. One group received an average of three to five individual counseling interviews, another the same number of group sessions, and the third represented the control group. The findings of the study pertinent to the VDI are summarized in the following two statements:

(1) Counseling, either individual or multiple does not have a statistically significant effect on the vocational maturity of potential dropouts as measured by the VDI. But the observed effects are in the positive direction. (2) Individual counseling and multiple counseling do not differ significantly in their effect on the vocational maturity of potential dropouts.

The Vocational Development Project is in the process of determining the reliability and validity of the VDI. Crites (1966, p. 9) states that:

"Considerable research must be done before the VDI is ready for use in counseling, but a start has been made ... Preliminary studies of its internal consistency and stability have already been completed, and the results have been encouraging.

To establish the validity of the test, the Project faces the problem of selecting appropriate criteria. However, the Attitude Scale has been administered a number of years now and sufficient data has been collected to begin longitudinal analyses of its validity (Crites, 1966).

Vocational Tenacity Test. Permission was obtained to modify the form of Ausubel's Vocational Tenacity Test, (VTT) to make it more appropriate and meaningful for the Flandreau Indian students. Refer to
Appendix C. In the modified version of the VTT, the subject reacts successively to three hypothetical vocational situations. He is asked to imagine that he is interested in graduating from college, on becoming a laboratory technician, and in teaching respectively, and that in the course of his studies he encounters obstacles of a designated nature. In each situation, three alternatives are presented, ranging from maintenance of the original goal at all costs (high vocational tenacity) to complete abandonment of the original goal (low vocational tenacity). The subject's choices in the three situations, appropriately weighted, are summated for a total score.

In each of the three situations, it is possible to obtain a score of one, two, or three which means that the range of the scoring scale is from three to nine. For example, an individual choosing to maintain the original goal at all costs in each of the three situations would attain a composite score of nine. A copy of the modified version of the VTT is included in Appendix B.

The VTT has had very little application as a research tool. Ausubel points out that: "To the best of my knowledge this test has not been used by anyone but myself" (Appendix C). The following studies are included to provide more information about the VTT as a measuring instrument.

Ausubel and others (1953) obtained "real-life" and laboratory measures of academic and vocational aspirations for a class of fifty juniors. Utilized as one of the measures of vocational aspiration was the VTT. He found that the girls made significantly lower mean scores
on the VTT than did boys. In explanation, it was noted that our culture permits girls to retire more gracefully from the competition with less loss of self-esteem, when confronted with serious obstructions to hypothetical goals.

In 1961, Ausubel employed the VTT, among other measures, in a study to identify culturally determined similarities and differences in the development of Maori and pakeha adolescents. The Maori are the indigenous Polynesian inhabitants of New Zealand and are regarded as a culturally deprived ethnic group as compared to the pakeha who are of predominantly European ancestry. Most of the Maori accept unskilled labor jobs when sixteen years of age, while the pakeha continue schooling and attain university degrees.

Ausubel compared the mean scores of the VTT between Maori and pakeha urban samples and found no differences. However, in comparing Maori and pakeha rural samples there was a significant difference (.05) in favor of the Maori group. In his analysis Ausubel points out that when the situation actually arises, that is confrontation of goals with serious obstacles, the Maori rural group exhibits strikingly less goal tenacity than the pakeha (Ausubel, 1961, p. 65).

Because the VTT is essentially a type of self-report device, reliability is very difficult not only to measure but also to insure. As the individual acquires new information about himself and his environment which may cause him to re-evaluate certain assumptions, he may certainly choose to change his report or in this case his hypothetical choices. The resulting effect on reliability appears obvious. The
validity of the instrument is equally important to consider. If an individual has had "limited experiences" it is conceivable that his estimation or choice of alternatives would be unrealistic since he has had a few experiences on which to base his judgment. Therefore his judgment would really not be valid since it would not measure what the individual would actually do in the situation.

**Statistical Procedures**

The calculation of means and standard deviations of the groups was accomplished by the use of the assumed mean method. The analysis of mean differences between each group was accomplished by computing the standard error of the difference between the means and comparing the results with the actual difference between the means. The fractional comparison is called the critical ratio. The t-test was applied to the critical ratio to check for level of significance. If the critical ratio is greater than 2.00, significance is indicated at the 5 percent level of confidence.

**Hypotheses to be Tested**

The general objectives were broken down into six specific null hypotheses and were tested at the .05 level of confidence.

**Differences on the Vocational Development Inventory**

**Hypothesis I-A**

There will be no difference in the vocational development of Indian high school students as measured by the Vocational Development Inventory for the Indian experimental group and the Indian control group.
Hypothesis I-B
There will be no difference in the vocational development of the Indian experimental group and the non-Indian public high school comparison group as measured by the Vocational Development Inventory following the experimental period.

Hypothesis I-C
There will be no difference in the vocational development of the Indian control group and the non-Indian public high school comparison group as measured by the Vocational Development Inventory following the experimental period.

Differences on the Vocational Tenacity Test

Hypothesis II-A
There will be no difference in the vocational tenacity of Indian high school students as measured by the Vocational Tenacity Test for the Indian experimental group and the Indian control group following the experimental period.

Hypothesis II-B
There will be no difference in the vocational tenacity of the Indian experimental group and the non-Indian public high school comparison group as measured by the Vocational Tenacity Test following the experimental period.

Hypothesis II-C
There will be no difference in the vocational tenacity of the Indian control group and the non-Indian comparison group as measured by the Vocational Tenacity Test following the experimental period.
CHAPTER IV

FINDINGS

A report of the findings of this investigation, together with a discussion, will be presented in this chapter. Specific statistical hypotheses will be stated and results pertinent to the testing of each statistical hypothesis discussed.

The t-test was used to analyze the data from the experiment. A description of concomitant results are included at the end of this chapter.

The findings reported have been based on data collected at the end of the treatment period. The purpose of the analysis to be presented is to determine what differences, if any, existed between the experimental, control, and comparison groups at the conclusion of the treatment period.

Statistical Hypothesis I-A: There will be no difference in vocational development between the Indian experimental and the Indian control group, as measured by the Vocational Development Inventory, following the treatment period.

<table>
<thead>
<tr>
<th></th>
<th>Mean Score</th>
<th>Standard Deviation</th>
<th>&quot;t&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Experimental</td>
<td>33.7</td>
<td>4.71</td>
<td>.92</td>
</tr>
<tr>
<td>Indian Control</td>
<td>32.6</td>
<td>5.84</td>
<td></td>
</tr>
</tbody>
</table>

* .05 t, df 76 = 2.00
It can be noted (Table 2) that the standard deviation for the experimental group is smaller than for the control group, which means less variability among the former. The mean average of the experimental group exceeded the mean of the control group. However, the obtained mean difference of 1.1 did not reach statistical significance when the t-ratio was computed (.92). Null hypothesis I-A is therefore accepted as one of the tenable hypotheses.

**Statistical Hypothesis I-B:** There will be no difference in vocational development between the Indian experimental group and the public comparison group, as measured by the Vocational Development Inventory, following the treatment period.

<table>
<thead>
<tr>
<th>Table 3. Comparison of Vocational Development Inventory Scores: Experimental and Comparison Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Score</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>Indian Experimental</td>
</tr>
<tr>
<td>Public Comparison</td>
</tr>
</tbody>
</table>

* .05 t, df 76 = 2.00

Results (Table 3) indicate that the public comparison group attained a higher mean score (38.2) than the Indian experimental group (33.7). The obtained t-ratio of 4.68 was found to be significant at the .01 level. The chances are less than one in 100 that this difference could be attributed to chance factors. Therefore, null hypothesis I-B is rejected at the .05 level of significance, and the alternate hypothesis, that there is a difference in the vocational development
between the Indian experimental group and the public comparison group, is accepted. The results favor the comparison group.

**Statistical Hypothesis I-C:** There will be no difference in vocational development between the Indian control group and the public comparison group, as measured by the Vocational Development Inventory, following the treatment period.

**Table 4. Comparison of Vocational Development Inventory Scores: Control and Comparison Groups**

<table>
<thead>
<tr>
<th></th>
<th>Mean Score</th>
<th>Standard Deviation</th>
<th>&quot;t&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Control</td>
<td>32.6</td>
<td>5.84</td>
<td>5.04 *</td>
</tr>
<tr>
<td>Public Comparison</td>
<td>38.2</td>
<td>3.7</td>
<td></td>
</tr>
</tbody>
</table>

* .05 t, df 76 = 2.00

Referring to the data accumulated in Table 4, it can be seen that the mean score of the public comparison group surpassed the mean score of the Indian control group. In terms of the specific hypothesis under test, the obtained t-ratio of 5.04 was greater than the required ratio to disprove statistical Hypothesis I-C at the .05 level of significance. Hence, null hypothesis I-C is rejected at the .05 level and the alternate hypothesis that there is a significant difference between the Indian control group and the public comparison group is accepted. The results indicate a significantly higher mean score for the comparison group.

**Statistical Hypothesis II-A:** There will be no difference in the vocational tenacity between the Indian experimental group and the Indian control group, as measured by the Vocational Tenacity
Test, following the treatment period.

Table 5. Comparison of Vocational Tenacity Test Scores: Experimental and Control Groups

<table>
<thead>
<tr>
<th></th>
<th>Mean Score</th>
<th>Standard Deviation</th>
<th>&quot;t&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Experimental</td>
<td>8.03</td>
<td>1.15</td>
<td>1.54</td>
</tr>
<tr>
<td>Indian Control</td>
<td>8.4</td>
<td>.96</td>
<td></td>
</tr>
</tbody>
</table>

* .05 t, df 76 = 2.00

Analysis of data indicates that the mean score for the control group, as is shown in Table 5, is somewhat higher than the mean score for the experimental group. The control group scores are also less variable. The obtained "t" of 1.54 does not reach the established criteria of the .05 level. It does, however, approach the "t" required for the .10 level (1.671). The difference, even though in the direction of significance, must be regarded as representing merely a chance deviation. Hypothesis II-A is accepted as one of the tenable hypotheses.

Statistical Hypothesis II-B: There will be no difference in the vocational tenacity between the Indian experimental group and the Indian control group, as measured by the Vocational Tenacity Test, following the treatment period.

Table 6. Comparison of Vocational Tenacity Test Scores: Experimental and Comparison Groups

<table>
<thead>
<tr>
<th></th>
<th>Mean Score</th>
<th>Standard Deviation</th>
<th>&quot;t&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Experimental</td>
<td>8.03</td>
<td>1.15</td>
<td></td>
</tr>
<tr>
<td>Public Comparison</td>
<td>8.2</td>
<td>.89</td>
<td>.74</td>
</tr>
</tbody>
</table>

* .05 t, df 76 = 2.00
After comparing the data in Table 6, it is evident that the experimental group has the larger variability. The mean difference between these two groups is less than that found in analysis II-A when comparing both Indian groups. In this case, the mean difference (.17) proved to be insignificant. Statistical hypothesis II-B is therefore acceptable as tenable.

Statistical Hypothesis II-C: There will be no difference in the vocational tenacity between the Indian control group and the comparison group, as measured by the Vocational Tenacity Test, following the treatment period.

Table 7. Comparison of Vocational Tenacity Test Scores: Control and Comparison Groups

<table>
<thead>
<tr>
<th></th>
<th>Mean Score</th>
<th>Standard Deviation</th>
<th>&quot;t&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Control</td>
<td>8.4</td>
<td>.96</td>
<td></td>
</tr>
<tr>
<td>Public Comparison</td>
<td>8.2</td>
<td>.89</td>
<td>.95</td>
</tr>
</tbody>
</table>

* .05 t, df 76 = 2.00

As can be seen from Table 7, the variability of each of these groups is small. The mean difference for the control group and comparison group (.2) is slightly larger than the mean difference found in analysis II-B for the experimental and comparison groups. The t ratio (.95) does not approach significance and statistical hypothesis II-C is accepted as a tenable one.
Discussion of Results

The general objective of this investigation was to determine if an occupational unit would affect the vocational development of Indian high school students. The analysis and comparison of the experimental group to the control group provided a negative answer to the question posed by this investigation. While the experimental group did not attain a significantly higher score on the VDI, as compared to the control group, the observed effect is in a positive direction. Less variability was found among the experimental, as compared to the control group, which could suggest that the experimental group become more homogeneous during the period of the occupational unit.

In a study, previously cited in this investigation, Ryan (1964) found no significant effects on the self-concept of students after a nine-week guidance class. Similarly, Das (1963), although evaluating the effects of counseling, found no significant differences after a limited number of counseling sessions. It would appear that short-term treatment, as is illustrated by the above studies and this investigation, have a limited, if any, affect on such firmly established impressions as an individual's attitudes and self-concept. Thus, it is questionable whether vocational development, involving attitudes, is amenable to significant changes in the time period allowed for the present investigation. A more comprehensive program seems required to affect vocational development. It would seem that occupational classes offered developmentally, as Sinick and others (1966) suggested, might provide a
more tenable approach (see Literature chapter).

The findings that both Indian groups had significantly lower scores than the public comparison group re-affirms, in an objective manner, that Indian students do have low vocational development. Generally, they seem to fit LoCascio's (1964) definition of persons having delayed vocational development, and might appropriately be referred to as vocationally retarded.

From the findings for the VTT, it may be noted that the Indian experimental has a lower vocational tenacity than the other two groups, although not significantly lower. This finding seems perplexing, but upon further analysis an explanation seems evident. It will be recalled that Ausubel (1961) found that one of the rural groups attested to higher vocational tenacity than what they exhibited, when confronted with the actual situation. It could be that the test is an indication of the student's awareness of vocational knowledge. Thus, it would appear that the Indian control and public comparison group, as well as Ausubel's rural group, were not aware of all the connotations involved in the different choices. In contrast, the experimental group, recently exposed to an occupational unit, was better prepared to perceive the various aspects involved in each alternative and consequently made more realistic choices. Therefore a lower score on the VTT, especially for a disadvantaged group, may be a meaningful indication of improved vocational perception. The greater variability among the experimental group scores on the VTT, might be an indication that some individuals were affected more in this manner than others.
Although the findings of this investigation were not statistically significant to reject the major hypotheses, it does not necessarily rule out the possibility that the occupational unit may have affected the vocational development and vocational tenacity of some students more than others. There was no measure to determine differential effects among students. The following observation by Crites, although in reference to counseling, seems to be applicable.

Traditionally, vocational counseling has been evaluated by comparing the means of the experimental and control groups, and if there are no differences, it has been concluded that the counseling had no effect. But we should infer only that on the average it had no effect. There may well have been differential effects across individuals (1964, p. 336).

Concomitant Results

Students in both the experimental and control groups received the individual counseling available to all students in the school. It was observed, however, that students in the experimental group asked for more individual counseling than the controls. As this additional counseling would not have occurred if the unit had not been presented, the additional counseling can be regarded as a resultant effect of the occupational unit.
SUMMARY AND CONCLUSIONS

Summary

This investigation was designed primarily to determine the effects of an occupational unit on the vocational development of Indian high school students. The subjects, for the investigation, included an experimental and control group selected from junior and senior students at the Flandreau Indian School and a comparison group obtained from a public high school. Each group contained 39 students.

The experimental group participated in an occupational unit consisting of three sessions per week, fifty minutes per session, for a total of twenty-two sessions. The course included vocational and educational information, an interest inventory, interpretation of test results, class discussion, filmstrips, and detailed independent study of one occupation or more. Following the termination of the occupational unit, the results were assessed by Crites's Vocational Development Inventory and a modified version of Ausubel's Vocational Tenacity Test.

No significant differences were found between the mean vocational development score of the Indian students, who participated in the occupational unit, and the Indian students who did not participate as measured by the Vocational Development Inventory. However, the public comparison group did have a significantly higher mean vocational development score than either Indian group.
The results of the Vocational Tenacity Test revealed no statistically significant mean differences between the three groups. However, the mean score difference between the Indian experimental group and the Indian control group did approach significance. The Indian students receiving occupational instruction, the experimental group, attained the lowest mean score. But, a lower score on the VTT, especially for a disadvantaged group, may indicate a more realistic comprehension of vocational choice situations, as compared to students who are not versed in occupational knowledge.

Conclusions

On the basis of the data presented in this investigation, the following conclusions appear warranted.

A short-term occupational unit apparently does not have any measurable effect on the vocational development of Indian high school students when the Vocational Development Inventory is used as a criterion measure. It seems questionable whether vocational development, involving firmly established attitudes, is amenable to change over a period of brief duration.

Indian high school students may be considered as having delayed vocational development. The significant differences between the Indian groups and the public comparison group tend to endorse the view that Indians have immature vocational behavior.
Limitations of the Study

The scope of this investigation was necessarily limited. At the beginning of the investigation it was evident that an occupational unit lasting twenty-two sessions was a limiting factor. A more extensive unit may have produced statistically significant results.

There are many criteria which could have been used to measure the effect of an occupational unit. The extent to which an occupational unit might be effective when using different criteria is not known as a result of this investigation.

Finally, the investigation did not attempt to consider other variables such as intelligence, age, or socio-economic background.

Recommendations

Based upon the findings of this investigation the following recommendations appear warranted.

1. It is recommended that the Indian High School incorporate a spiraling occupational course in their curriculum. Such information and experiences, to be maximally effective, should be continuous through all four years of high school.

2. Further investigation should be made to determine the effects of a more extensive occupational unit on the vocational development of Indian students.

3. Conceivably, other investigations might attempt to ascertain what techniques or combination of techniques are most effective in
dealing with Indian students. It is felt, by the writer, that Indian students require more concrete experiences, such as actual observation or participation, in order to incorporate occupational information into their experiences.

4. People engaged in writing occupational information should attempt to relate such information to the high school Indian student's needs and reading level. A meager amount of occupational material is applicable to this group.

5. A follow-up study might determine the effectiveness of the occupational unit utilizing the criteria of job satisfaction, earnings, and/or employment records.

6. Further investigations could attempt to correlate the results of an occupational unit with other factors such as intelligence, age, or socio-economic background.
SELECTED REFERENCES


6. Bureau of Indian Affairs, United States Department of Interior, Memorandum to All Superintendents and Reservation Principals, Aberdeen, South Dakota: November 2, 1964.


APPENDIX A
APPENDIX A

OUTLINE FOR OCCUPATIONAL-EDUCATIONAL UNIT

SESSION I. Orientation
A. General purpose of class.
B. Definition of occupational information.
C. Listing of student questions concerning occupational and educational information.
D. Filling out of questionnaire to help determine class interest.

SESSION II. Knowing Yourself
A. Discussion of individual differences and interests.
B. Importance of knowing one's interests, assets, and limitations.
C. Ways in which individual differences affect job choices. Examples made.
D. Brief explanation of Kuder Preference Record, Vocational.

SESSION III. Self Appraisal
A. Discussion pertaining to "Knowing Yourself" and purpose of Kuder Preference Record, Vocational.
B. Clarification of directions for Kuder.
C. Administration of Kuder Preference Record, Vocational.

SESSION IV. Correction and Interpretation of Kuder
A. Directions for correction of Kuder Record by students.
B. Directions for completing profile sheet for Kuder Preference Record, Vocational.
C. Explanation of the ten preference areas measured by the Kuder.

SESSION V. Interpretation of Kuder and Other Tests
A. Explanation of percentile rank.
B. Clarification of meaning of Kuder scores.
C. Interpretation of example profiles relating areas of interests to occupational fields.
D. Job families defined.
   1. How knowledge of job families can be valuable.
E. Explanation and purpose of other tests students take.
APPENDIX A (Continued)

F. Explanation of some basic statistical concepts.
   1. Reliability
   2. Standard error
   3. Norms

SESSION VI. Knowing the World of Work

A. Facts about the occupational structure.
B. Increasing one's employment opportunities.
   1. Apprentice-ship training
   2. On-the-job-training
   3. Types of schools for different types of training
   4. College education
C. Schooling requirements related to various types of training.

SESSION VII. Knowing the World of Work

A. Viewing of filmstrip entitled, "An Overview of Technical Education."
B. Discussion of jobs illustrated in filmstrip.

SESSION VIII. Choosing An Occupation

A. Illustration of how choosing is developmental.
B. Influences on career choice.
C. Factors to consider.
D. Analysis of a job considering above factors.
E. Case Examples: Which job would you choose?

SESSION IX. Library Review

A. Introduction to occupational books, files, and pamphlets.
B. Overview of materials. Brief reading time allowed.
C. Explanation of use of occupational file and Adult Vocational Training binders.

SESSION X. Occupational Information Study

A. Distribution of occupational study outline and discussion.
B. Explanation of what to consider when studying an occupation.
APPENDIX A (Continued)

C. Choosing of an occupation to study.
D. Individual study time.

SESSION XI. Opportunities Especially for Indian Youth
A. Distribution of information brochure.
B. Explanation of course offerings at six bureau schools.
C. General and individual requirements of the bureau schools.
D. Application procedures of the schools.
E. Familiarization with applications for bureau schools.

SESSION XII. Adult Vocational Training and Armed Forces
A. Explanation of Adult Vocational Training and requirements.
B. Illustration of how to use index to find in which areas can take training under Adult Vocational Training.
C. Discussion of requirements and training opportunities in armed forces.
D. Discussion of pros and cons of choices.

SESSION XIII. Individual and Group Work
A. Sharing of information.
   1. X-ray technician
   2. Nursing
   3. Airline hostess

SESSION XIV. Overview of Various Jobs
A. Viewing of filmstrip entitled, "If You're Not Going to College."
B. Discussion of filmstrip.
C. Individual study on occupations.

SESSION XV. Study of Haskell Graduates
A. Distribution of information leaflet.
B. Comparison of starting salaries over a 10 year period.
C. Comparison of starting salaries by types of training.
D. Comparison of salaries among the same type of training.
APPENDIX A (Continued)

E. Comparison of salaries between different states.
F. Individual reading time.

SESSION XVI. Individual and Group Work

A. Sharing of information.
   1. Carpentry
   2. Electronic and computer related jobs.

SESSION XVII. College Information

A. Qualities required for college.
   1. Criteria established for college entrance
   2. Tests to take
B. Review of different kinds of colleges.
C. Factors to consider when choosing a college.
D. Discussion of reasons for attending college.
   1. Examples: "If you wanted to be a ..."
E. Explanation of degrees offered.

SESSION XVIII. Learning to Read a College Catalogue

A. Individual study except for group interested in college.
B. Handout of college catalogue for study.
C. Familiarization with sections of the catalogue.
D. Explanation of terms and daily class structure.
E. Overview of programs offered.
F. Handout of various catalogues for comparison of programs offered.

SESSION XIX. Financing a College Education

A. Individual study except for group interested in college.
B. Expenses to consider.
C. Explanation of Federal Grant Aid program.
D. Explanation of out-of-state tuition and effect on Federal Grant Aid program.
E. State and tribal scholarships discussed.
   1. Familiarization with sample application forms
F. Discussion of college scholarships.
G. Discussion of part-time work coupled with schooling.
APPENDIX A (Continued)

SESSION XX. Applying For a Job

A. Learning how to find a job.
B. Applying for a job.
   1. Filling out of applications
   2. Providing references
   3. Etiquette of requesting references
C. Interviewing for a job.
   1. Purpose of the interview
   2. Good interviewer skills

SESSION XXI. Interviewing

A. Viewing of filmstrip entitled, "Your Job Interview."
B. Example of a good interview.
C. Example of a poor interview.
D. Discussion of possible questions which might be asked in an interview.

SESSION XXII. Summary, Discussion, and Evaluation

SUPPLEMENTARY MATERIALS USED IN THE
OCUPATIONAL-EDUCATIONAL UNIT

Mimeographed Hand-out Material

1. "Choose Your Road and Travel" booklet
2. Colleges Sponsoring Indian Educational programs
3. Haskell Graduates Salary Comparison

Work Blanks

1. Occupational Interest Survey Questionnaire
2. Outline for the Study of an Occupation

Self-Appraisal Device

1. Kuder Preference Record, Vocational

Filmstrips

1. "An Overview of Technical Education"
APPENDIX A (Continued)

2. "If You're Not Going to College"
3. "Your Job Interview"

Other

1. Occupational Outlook Handbook
2. Chronicle Occupational File
3. Adult Vocational Training Binders
APPENDIX B

VOCATIONAL DEVELOPMENT INVENTORY

ATTITUDE SCALE

Directions:

There are a number of statements about occupational choice and work listed in this booklet. Occupational choice means the kind of job or work that you think you will probably be doing when you finish all of your schooling.

If you agree or mostly agree with the statement, use your pencil to blacken the circle in the column headed T on the separate answer sheet. If you disagree or mostly disagree with the statement, blacken the circle in the column headed F on the answer sheet.

1. Once you choose a job, you can't choose another one.
2. In order to choose a job, you need to know what kind of person you are.
3. I plan to follow the line of work my parents suggest.
4. I guess everybody has to go to work sooner or later, but I don't look forward to it.
5. A person can do any kind of work he wants as long as he tries hard.
6. I'm not going to worry about choosing an occupation until I'm out of school.
7. Your job is important because it determines how much you can earn.
8. Work is worthwhile mainly because it lets you buy the things you want.
9. The greatest appeal of a job to me is the opportunity it provides for getting ahead.
10. I often daydream about what I want to be, but I really haven't chosen a line of work yet.
11. Knowing what you are good at is more important than knowing what you like in choosing an occupation.

12. Your parents probably know better than anybody which occupation you should enter.

13. If I can just help others in my work, I'll be happy.

14. Work is dull and unpleasant.

15. Everyone seems to tell me something different, until now I don't know which kind of work to choose.

16. I don't know how to go about getting into the kind of work I want to do.

17. Why try to decide upon a job when the future is so uncertain.

18. I spend a lot of time wishing I could do work that I know I cannot ever possibly do.

19. I don't know what courses I should take in school.

20. It's probably just as easy to be successful in one occupation as it is in another.

21. By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter.

22. There are so many things to consider in choosing an occupation, it is hard to make a decision.

23. I seldom think about the job I want to enter.

24. It doesn't matter which job you choose as long as it pays well.

25. You can't go very far wrong by following your parents' advice about which job to choose.

26. Working is much like going to school.

27. I am having difficulty in preparing myself for the work I want to do.
APPENDIX B (Continued)

28. I know very little about the requirements of jobs.
29. The job I choose has to give me plenty of freedom to do what I want.
30. The best thing to do is to try out several jobs, and then choose the one you like best.
31. There is only one occupation for each person.
32. Whether you are interested in a particular kind of work is not as important as whether you can do it.
33. I can't understand how some people can be so set about what they want to do.
34. As long as I can remember I've known what kind of work I want to do.
35. I want to really accomplish something in my work—to make a great discovery or earn lots of money or help a great number of people.
36. You get into an occupation mostly by chance.
37. It's who you know, not what you know, that's important in a job.
38. When it comes to choosing a job, I'll make up my own mind.
39. Choose an occupation which gives you a chance to help others.
40. When I am trying to study, I often find myself daydreaming about what it will be like when I start working.
41. I have little or no idea of what working will be like.
42. Choose an occupation, then plan how to enter it.
43. I really can't find any work that has much appeal to me.
44. Choose a job in which you can someday become famous.
45. If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions.
46. Choose a job which allows you to do what you believe in.

47. The most important part of work is the pleasure which comes from doing it.

48. I keep changing my occupational choice.

49. As far as choosing an occupation is concerned, something will come along sooner or later.

50. Why worry about choosing a job when you don't have anything to say about it anyway.

Vocational Development Inventory Scale

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APPENDIX B (Continued)

VOCATIONAL TENACITY TEST

Name ___________________________ School ___________________________

Grade ______________ Age __________________________

A. Assume that you are very anxious to graduate from college. At the end of the first year, however, you find you do not have enough money to return to school next year. Would you

1. Leave college and take the best job you can find.

2. Accept a job in a cafeteria part-time which would help pay your expenses realizing that this means extra work and that it would take you a year longer to get through college.

3. Leave college, get a loan (which you must pay back later) and take a business course at a 2-year school.

DIRECTIONS: Put an X in front of the alternative you would choose.

B. Assume that you are strongly interested in becoming a laboratory technician. You study hard. After completing the first year, you find that you have failed required chemistry and biology courses. Your college teacher suggests these alternatives to you:

1. You would repeat the chemistry and biology courses and take the examination a second time, hoping to pass this time.

2. You could leave the college and take the best job you could find.
3. You could change your mind about being a laboratory technician and get your college degree in some other field which doesn't require science courses.

C. Assume that you want to become a high-school teacher. Before you can become a teacher you must do student-teaching. However, you are required to have a "C+" average before you can student teach. Your grade-point average, a "C-" is too low. Your college teacher tells you that you can choose one of the following:

1. You could forget about being a teacher and graduate in another field of study which doesn't require such a high grade point.

2. You could leave college and accept the best job offer available.

3. You could attend college another year and study hard to raise your grade-point average enough so that you can student teach and graduate as a teacher.
February 10, 1967

Shirley F. Jensen
104 1/2 4th St.
Brookings, South Dakota 57006

Dear Mrs. Jensen:

I am forwarding to you under separate cover the latest materials on the Vocational Development Inventory. At the present time we have no additional information about the performance of Indian students on the VDI. Dr. Thomas McCrystal, University of North Dakota, is currently using the VDI in a research battery which is being administered to Indian children (grades 5-12). He should be nearly completed with his testing, and some of his results might be available soon.

If you should decide to use the VDI we will be gladly provide the necessary test booklets, answer sheets and scoring gratis. We score the answer sheets and return to you a deck of IBM cards and a printout of all the information and scores. We retain a duplicate deck of cards for comparison with other samples.

Thank you for your interest in the Vocational Development Inventory.

Sincerely,

Don Nance
Project Assistant

DN/sp
APPENDIX C (Continued)

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION

102 Bloor Street West, Toronto 5, Ontario, Canada
Telephone 923-6644

April 17, 1967.

Mrs. Shirley Jensen,
104½ 4th St.,
Brookings, S. Dak. 57006,
U.S.A.

Dear Mrs. Jensen:

Thank you for your letter of April 10.

I am enclosing a copy of the Vocational Tenacity Test which, of course, you are free to use in your Indian study, if applicable. One hypothetical career was changed from skilled trade to fine arts to make it more comparable to the other careers in terms of university preparation. I think that any vocations that are meaningful for your Indian group would be suitable. To the best of my knowledge this test has not been used by anyone but myself.

Sincerely yours,

D.P. Ausubel,
Professor of Psychology and Education, and Professor of Educational Theory,
University of Toronto

Encl.