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AUTHOR Cowen, Agnes
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ABSTRACT

A study was conducted to enhance the equal access and opportunity of Cherokee Indian youth to vocational education through the development and implementation of strategies designed to stimulate junior high school teachers to assume the responsibility of vocational counseling and guidance in the regular classroom curriculum. A second objective was to reduce sex role stereotyping in the counseling and guidance programs. Two adjacent counties of similar demographic composition in northeastern Oklahoma participated in the study. All eighth-grade students were administered "Planning Career Goals," an instrument that measures and correlates interests, information, and abilities related to occupations on a pre- and post-test design. The experimental schools had access to the test results, the control schools did not. Some schools within the experimental and control schools had designated building facilitators; some had access to incentive pay, some did not. The variable of the building facilitator was also analyzed in the treatment of the data. The results of the statistical analysis did not reveal any significant differences between the control and experimental populations. The short interval of time (nine months) may have affected the outcome. It was also concluded that the diagnostic information and the building facilitators did not significantly contribute to the growth in decision making of the 501 students in the study. (Author/BM)

Final Report

Project No. 498AH70173
Grant No. G007702065

A Study of the Contribution of Diagnostic Test Data to Maturity in the Career-Decision-Making Process

Agnes Cowen

Cherokee Education Center

Tahlequah, Oklahoma 74464

November 30, 1978

The research reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education

Bureau of Occupational and Adult Education

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PROJECT ABSTRACT

PROJECT NUMBER: 498AH70173 GRANT NUMBER: G007702065

PROJECT TITLE: The Contribution of Diagnostic Data in Career Education Programs in Junior High Schools in the Cherokee Nation

PROJECT DIRECTOR AND ORGANIZATION: Mrs. Agnes Cowen, Project Director
Cherokee Education Center
P. O. Box 769
Tahlequah, Oklahoma 74464
(918) 456-6177

GRANT PERIOD: September 1, 1977 to June 30, 1978

FUNDING LEVEL: Federal: $40,322 Local: $20,000 Total: $60,322

OBJECTIVES OR PURPOSES:

The principal objective was to enhance the "equal access and opportunity" of Cherokee Indian youth in rural areas of the Cherokee Nation in Oklahoma to vocational education through the development and implementation of new strategies designed to stimulate teachers at the junior high level to assume the responsibility of vocational counseling and guidance in the regular classroom curriculum. A second objective was to reduce sex-role stereotyping in the counseling and guidance programs designed to guide youth into vocational education. There were two variables under study: (1) The contribution of diagnostic information in career education programs for junior high students and (2) the contribution of incentive pay for building facilitators of career education programs.

PROCEDURES OR APPROACH:

Two adjacent counties of similar demographic composition in northeastern Oklahoma, each having a county seat with a high school serving as a receiving school to ten dependent rurally isolated community schools, were under study. All eighth grade students were administered Planning Career Goals, an instrument that measures and correlates interests, information, and abilities related to occupations on a pre- and post-test design. The experimental schools had access to the test results, the control schools did not. Designated schools within the experimental and control schools had designated building facilitators; some had access to incentive pay, some did not. The variable of the building facilitator was analyzed in the treatment of the data. A post-test was administered to both the control and experimental schools.

EXPECTED CONTRIBUTION TO EDUCATION:

The results of the statistical analysis did not reveal any significant differences between the control and experimental populations. The very short interval of the time for the study (September 1977 to May 1978) may have affected the outcome. It must be concluded from the study that the diagnostic information and the building facilitators did not significantly contribute to the growth in decision making of the 501 students in the study.

VOCATIONAL TRAINING RESEARCH

The grant from Vocational Training Research, Part C, awarded to the Cherokee Education Center of Tahlequah, Oklahoma, was modified to accommodate one-year funding rather than the three-year funding requested in the proposal. The following changes were made to facilitate the completion of the research project in one year:

1. Population to be studied was originally all seventh, eighth and ninth grade students in twenty-two (22) schools in Adair and Cherokee counties of northeastern Oklahoma. The population was reduced to the seventh and eighth grade students upon receipt of funding due to the one-year limitation. All seventh and eighth grade students were pre-tested, and the conclusion reached that the testing instrument was too difficult for the seventh-grade population. A decision was made to use only the eighth grade students in the post-testing. This left a population of 756 students under study of which 501 had suitable scores for the final analysis.

2. The original proposal called for the administration of the Career Maturity Inventory as the basic measuring device for determining maturity in career decision-making. This instrument was replaced with the Planning Career Goals developed by American Institutes for Research as an outgrowth of Project TALENT. All interpretation of the measures provided in this test is based on a single massive data source—the 400,000 student sample of Project TALENT that was studied longitudinally for more than ten years. This test is the best diagnostic instrument available. The test contains three basic batteries: (1) The Interest Inventory which surveys the subject's interests in occupations and activities; (2) The Information Measures which assesses the subject's knowledge of the twelve-cluster occupational categories; and (3) The Ability Measures which measures present abilities necessary to succeed in the twelve-cluster occupational categories. This test is a relatively new instrument and had not been identified by the Cherokee Education Center until after the grant had been awarded.

3. The change in measuring device dictated a change in the evaluation design. Instead of using central tendency analysis, a nonparametric test was employed to detect movement or change in maturity of career decision-making. The new design described in the following narrative under "Evaluation Design" is a more sensitive analysis and more readily detects change, both positive and negative.

4. The "incentive pay" for modular production by teachers was dropped at the time of budget revision. The "incentive pay" for designated building facilitators was retained for study.

5. Data to be collected was reduced to the test results. The original proposal called for the collection of the enrollment distribution in the vocational education courses in the schools. The data was to be collected over a three-year period. It is no longer possible to include this data in the study because of the time limitation.

6. It should be recognized that the time limitation for treatment of the experimental population was seriously reduced from three years to one year. In the actual execution of the study it was further reduced to three months. This had an adverse effect on the outcome of the study.

FINAL REPORT

A Final/Report of the Vocational Education Research Project Grant to the Cherokee Education Center of Tahlequah, Oklahoma.

Statement of the Problem

The principal objective of the proposal was to enhance the "equal access and opportunity" of Cherokee Indian youth in rural areas of the Cherokee Nation to vocational education through the development and implementation of new strategies designed to stimulate teachers at the junior high level to assume the responsibility of vocational counseling and guidance in the regular classroom curriculum. A second objective was to reduce sex-role stereotyping in the counseling and guidance programs designed to guide youth into vocational education. The major objectives can be viewed and measured more precisely through the following sub-objectives:

1. At the end of the first year of the project period, the students in grades seven and eight of the experimental population will demonstrate growth in the career decision-making process as reflected in the pre- and post-test scores of an instrument designed to measure the important variables of career decision-making when compared to the control population.

2. At the end of the first year of the project period, those students in the experimental population who attend schools where a building facilitator has been designated will demonstrate growth in the career decision-making process as reflected in the pre- and post-test scores of an instrument designed to measure the important variables of career decision-making when compared to other students in the experimental population who do not have a designated building facilitator.

3. At the end of the first year of the project period, those students in the experimental population who attend schools where the designated building facilitator receives incentive pay, will demonstrate growth in career decision-making process as reflected in the pre- and post-test scores of an instrument designed to measure the important variables of career decision-making when compared to students in the experimental population who attend schools where the designated building facilitator does not receive incentive pay.

The Plan

Cherokee County and Adair County are adjacent counties in the Cherokee Nation of northeastern Oklahoma. The demographic composition of the counties are very similar with significant percentages of Cherokee people. Tahlequah, Oklahoma, located in Cherokee County

is the county seat and is the receiving school for ten rurally isolated dependent schools with significant percentages of Cherokee children. Stilwell, Oklahoma, located in Adair County is the county seat and is also the receiving school for nine rurally isolated dependent schools with significant percentages of Cherokee children.

Both city school systems maintain vocational education programs at the high school level and the enrollment in vocational education courses at both schools reflect the limited access of the Cherokee to the courses. It is believed that this limited access is the result of limited experiences on the part of the Cherokee students and inadequate counseling and guidance on the part of the teachers in the regular classrooms. Sex-role stereotyping is predominant in the vocational courses at both schools.

Experimental vs. Control

The seventh and eighth grade populations in the following schools were designated as the experimental schools: Tahlequah, Keys, Peggs, Lowrey, Lost City, Woodall, Grandview, Shady Grove, Briggs, and Tenkiller, all in Cherokee County; Greasy and Dahlonegah in Adair County, Salina in Mayes County; and Marble City in Sequoyah County. The control seventh and eighth grade populations were: Stilwell, Bell, Christie, Maryetta, Peavine, Rocky Mountain, Skelly and Zion, all in Adair County. Salina in Mayes County and Marble City in Sequoyah County have been included in the study because of their similar demographic composition to the other schools and their willingness to designate building facilitators for career education.

Variables to be Studied

The variables under study were two: (1) the contribution of diagnostic data related to career decision-making as measured by Planning Career Goals and (2) the contribution of incentive pay to building facilitators for modular production results related to guidance and counseling in career education programs.

Admittedly the history of career awareness training for teachers has not been boastfully successful. The fault may not all be due to teacher apathy. The typical career awareness or education inservice for teachers has in the past zeroed in on the cognitive aspects of the world of work. Much attention has been given to studying job clusters, statistics and the preparation of

materials for teaching, but very little or no attention has been given to ways and means of better understanding the individual student who was to benefit from all of the information the teacher was receiving. So it was not surprising that the teacher returned to the classroom not sure what to do for the students other than present the information given the teacher, and in far too many instances not even this was done.

Teachers are professionals who for the most part have genuine concern for those they teach and will attempt to do for students what they feel or know should really be done. Armed with information about the student and his needs, the teacher will find a way to meet those needs.

Thus, a diagnostic approach to determining individual student needs in the area of career decision-making may ultimately be more effective in motivating the classroom teacher to seriously undertake the task of guidance and counseling for career education.

The second variable to be studied, the contribution of incentive pay to building facilitators for modular production results related to guidance and counseling in career education programs, was definitely not a new approach even though it has largely been ignored. Incentive pay is recognized as a fruitful and honorable way to stimulate production in almost all vocational areas. However, few people have dared to believe that the teacher could be stimulated by reward for successful behavior. The almost total rejection of merit pay by the teaching profession and the public is a good example of this.

Treatment of the Variables

Both the experimental and control population were pre-tested during the month of October, 1978, with Planning Career Goals, developed by American Institutes for Research. Post testing was completed in April-May 1978. The PCG combines an interest inventory, career information measures, ability measures, and a life and career plans survey into a single testing system. All interpretation of these measures is based on a single massive data source the 400,000-student Project TALENT sample that was tested in 1960 and followed up for five years and eleven years after high school.

The Interest Inventory surveys the examinee's interest in occupations, occupational activities, and current activities. The Information Measures assesses the individual's knowledge

of the occupation(s) in which he has expressed interest. The Ability Measures includes reading comiprehension, mathematics, abstract reasoning, creativity, mechanical reasoning, English, quantitative reasoning, vocabulary, visualization, and computation. The abilities measured are those that best differentiated among members of various occupations in Project TALENT. Scores produced are regarded as measures of current levels of individual development, rather than indicators of fixed levels of potential.

The teachers in the experimental classrooms were given the pre-test data for use in career and vocational counseling. This information could not be given to the teachers until the last week of January 1978 due to delay in test scoring, Christmas vacations, and school closings due to snow conditions. Each student was given an individual profile report which presents the examinee's scores for all four sections on one integrated form with a computer-generated narrative that highlights significant scores. Interest and abilities scores are in profile format for ready comparison with profiles for various careers.

In addition to the profile reports, the teachers of the experimental classes received a Counselor's Handbook which provided advice for guiding student use of a Career Handbook, in which descriptions of the occupations are listed. The teacher and the student were to utilize these aids in using the diagnostic data provided each student.

Seven of the experimental schools had a Designated Building Facilitator for career and vocational educational activities. The seven schools were: Greasy and Dahlonegah in Adair County; Tenkiller, Briggs and Lost City in Cherokee County; Salina in Mayes County; and Marble City in Sequoyah County. Three of the seven designated building facilitators had the opportunity to receive incentive pay for modular production results related to guidance and counseling in career education programs. The three schools with designated building facilitators receiving incentive pay were Greasy and Dahlonegah in Adair County and Salina in Mayes County. The incentive pay schedule for designated building facilitators is attached in Appendix C. The other four building facilitators were not aware of the ingentive pay arrangement for the three schools.

It was the primary responsibility of the facilitators to involve the rest of the faculty and the students in activities designed to create vocational awareness for the students. The facilitators were encouraged to arrange for inservice training for the teachers in the schools. Arrangements

could be made with the Cherokee Education Center by the facilitators to provide consultants and/or materials for inservices. The facilitator had the opportunity to conduct inservice for teachers.

The only difference in treatment between the designated building facilitators with incentive pay and the designated facilitators without incentive pay was the incentive pay. The incentive pay was the variable under study.

Treatment of the Control Schools

Grades seven and eight of the control schools were pre-tested at the same time as the experimental population. Only grade eight was post-tested in April 1978 at the same time as the experimental population because of the difficulty of the test for the seventh grade students. There were no other activities with the control population other than the testing. They did not receive the results of the pre-tests until after the post-tests were completed.

Evaluation Design

The basic objective of the plan was to increase access of Cherokee Indian students in northeastern Oklahoma to vocational education offered in the public schools and the area vocational-technical schools. A secondary objective was to reduce sex-role stereotyping in vocational education counseling and guidance.

Variables under Study

The variables under study were two: (1) the contribution of pre-test diagnostic information related to career decision-making process to counseling and guidance, and (2) the contribution of "incentive pay" for building facilitators based on modular production in activities related to career guidance and counseling.

Data Collected

The expressed interests for vocations and careers, the measured interests in vocations and careers, the measured information about vocations and careers, and the abilities related to the expressed interests, and measured interests were gathered in one integrated instrument known as

Planning Career Goals. This instrument was administered on a pre- and post-test basis at the beginning and again at the end of school year 1977-78 to the eighth grade in the experimental and control populations.

Each student was given an opportunity to express a first and second career choice falling within one of twelve clusters: (1) Engineering, Physical Sciences, and Mathematics; (2) Medical and Biological Sciences; (3) Business Administration; (4) Teaching and Social Service; (5) Humanities, Law, and Social and Behavioral Sciences; (6) Fine Arts and Performing Arts; (7) Technical Jobs; (8) Proprietors and Sales Workers; (9) Mechanics and Industrial Trades; (10) Construction Trades; (11) Secretarial-Clerical, Office Workers; and (12) General Labor and Public and Community Services. The student then completed an interest inventory that served his interests in occupations, occupational activities, and current activities. Next, he completed an information section which measured his knowledge of the careers and occupations within the twelve clusters. The last assessment was an abilities measure which measured his present development in reading comprehension, mathematics, abstract reasoning, creativity, mechanical reasoning, English, quantitative reasoning, vocabulary, visualization, and mathematical computation. All scores were regarded as fixed levels of potential.

The test results for information measures were presented in stanine form. The test results for abilities were presented in both stanines and percentiles. The data for the interests inventory were presented in five categories: "Dislike Very Much," "Dislike," "Not Sure," "Like Fairly Well," and "Like Very Much."

Each student profile was interpreted by computer analysis in regards to the normative population on whom the test was standardized, the young people in project TALENT who were studied longitudinally for a number of years and actually entered the professions listed on the test. The data presented by the test are not discrete nor interval data.

Treatment of the Data

Since all of the data are not interval or discrete, they do not qualify for analysis by measures of central tendency or range. Thus, the nonparametric test, Chi-Square was employed to determine the extent of agreement and change among the sub-tests for each student in the study. Specifically the agreement between the following sub-tests: (1) Expressed Career Choices

and Measured Interests; (2) Expressed Career Choices and Measured Information; (3) Expressed Career Choices and Measured Abilities; (4) Measured Interests and Measured Information; (5) Measured Interests and Measured Abilities; and (6) Measured Information and Measured Abilities.

An arbitrary value was assigned to the following degrees of Measured Interests: "Dislike Very Much" = 1 and 2; "Dislike" = 3 and 4; "Not Sure" = 5 and 6; "Like Fairly Well" = 7 and 8; and "Like Very Much" = 9. This was accomplished by drawing a line through the midpoint of the first four categories on the printout producing a high and low score in each category. This provided for a more finite discrimination and resulted in nine numerical classifications of Measured Interests; the same scale as the stanine classification for the sub-tests of Information and Abilities. The stanines for the sub-tests of Information and Abilities were employed for tabulating.

Expressed Career Choices Compared to Measured Interests, Information and Abilities

STEP 1: To reveal the value of the agreement between the Expressed Career Choices and the Measured Interests, Measured Information, and Measured Abilities, the first and second Expressed Career Choices were identified from the individual printout. The values assigned to the related Measured Interests, Measured Information, and Measured Abilities were cast into three-celled contingency tables.

First Expressed Career Choice
Agreement With

	Measured Interest	Measured Information	Measured Abilities
Pre-Test			
Post-Test			

Second Expressed Career Choice
Agreement With

	Measured Interest	Measured Information	Measured Abilities
Pre-Test			
Post-Test			

STEP 2: To reveal the degree of change in agreement in Expressed Career Choices and Measured Interests, Information and Abilities, the pre-test and post-test scores in each cell were compared. If the post-test was smaller, the change was regarded as negative. If the post-test was larger, the change was regarded as positive. Each positive change, each negative change, and each "no change" were cast into a two by three table constructed for each set of relationships. The tabulation from the two by three tables revealed the total number of positive changes, the total number of negative changes, and the total of "no changes" for both the experimental and control groups. A positive change was regarded as increased maturity in "career decision-making." The Chi-Square test was used to determine the significance of differences between the two independent groups.

First Expressed Career Choice

Agreement With

Measured Interest

	Pos	Neg	No Change
Control			
Exp			

Measured Information

	Pos	Neg	No Change
C			
E			

Measured Abilities

	Pos	Neg	No Change
C			
E			

Second Expressed Career Choice

Agreement With

Measured Interest

	Pos	Neg	No Change
Control			
Exp			

Measured Information

	Pos	Neg	No Change
C			
E			

Measured Abilities

	Pos	Neg	No Change
C			
E			

STEP 3: To reveal the degree of agreement between Measured Career Interests and (a) Measured Information and (b) Measured Abilities, the two highest measured interests were chosen. The difference between the numerical value of the measured interest and the numerical value of the related (a) measured information and (b) measured abilities revealed the degree of difference in agreement. Both pre-test and post-test differences were cast into a two-celled contingency table constructed for each student.

Highest Measured Career Interest
Differences in Agreement
With

	Measured Information	Measured Abilities
Pre-Test		
Post-Test		

Second Highest Measured Career Interest
Differences in Agreement
With

	Measured Information	Measured Abilities
Pre-Test		
Post-Test		

STEP 4: To reveal the degree of change in agreement between the Measured Career Interests and (a) Measured Information and (b) Measured Abilities, the pre-test and post-test differences of agreement were compared. A smaller difference in agreement was considered a positive change. A larger difference in agreement was considered a negative change. A third category of "no change" was utilized. Each positive change, each negative change, and each

"no change" was cast into a two by three table constructed for each set of relationships. The tabulation from the two by three tables revealed the total number of positive changes, the total number of negative changes, and the total of "no changes" for both the experimental and control groups. A positive change was regarded as increased maturity in "career decision-making." The Chi-Square test was used to determine the significance of differences between the two independent groups.

Highest Measured Career Interest
Differences In Agreement
With

	Measured Information				Measured Abilities			
	Pos	Neg	No Change		Pos	Neg	No Change	
Control				C				
Exper.				E				

Second Highest Measured Career Interest
Difference In Agreement
With

	Measured Information				Measured Abilities			
	Pos	Neg	No Change		Pos	Neg	No Change	
Control				C				
Exper.				E				

STEP 5: To reveal the absolute movement of change in agreement between the two highest Measured Career Interests and (a) Measured Information, (b) Measured Abilities, the numerical value of the measured interests were added to the numerical value of the related (a) Measured Information and (b) Measured Abilities. Both pre-test and post-test sums were cast into a two-celled contingency table constructed for each student.

Highest Measured Career Interest

Sums of Agreement

With

	Measured Information	Measured Abilities
Pre-Test		
Post-Test		

Second Highest Measured Career Interest

Sums of Agreement

With

	Measured Information	Measured Abilities
Pre-Test		
Post Test		

STEP 6: The pre-test and post-test sums of agreement were compared for each cell. When the post-test score was larger than the pre-test score, the change was considered positive. When the post-test score was smaller, the change was considered negative. A third category of "no change" was utilized. Each positive change, each negative change, and each "no change" were cast into a two by three table constructed for each set of relationships. The tabulation from the two by three tables revealed the total number of "no changes" for both the experimental and control groups. A positive change was regarded as increased maturity in "career decision-making." The Chi-Square test was used to determine the significance of difference between the two independent groups.

Highest Measured Career Interest
Sums of Agreement
With

	Measured Information			Measured Abilities		
	Pos	Neg	No Change	Pos	Neg	No Change
Control						
Exper.						

Second Highest Measured Career Interest
Sums of Agreement
With

	Measured Information			Measured Abilities		
	Pos	Neg	No Change	Pos	Neg	No Change
Control						
Exper.						

Hypothesis to be Tested

HO_1: The students in the experimental population who have had access to the diagnostic information will demonstrate a greater positive change when compared to the control group who have not had access to the diagnostic information. The difference will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information, and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared to (1) Measured Information and (2) Measured Abilities for differences in agreement.

c. When Measured Career Interests are compared to (1) Measured Information and (2) Measured Abilities for absolute movement of change in agreement.

HO_2: The students in the experimental population who attend schools where a building facilitator has been designated will demonstrate a greater positive change when compared to

those students in the experimental population who attend schools where a building facilitator has not been designated. The difference will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared (1) Measured Interests, (2) Measured Information and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared (1) Measured Information and (2) Measured Abilities for differences in agreement.

c. When Measured Career Interests are compared to (1) Measured Information and (2) Measured Abilities for absolute movement of change in agreement.

HO_3: Those students in the experimental population who attend schools where the designated building facilitator receives incentive pay will demonstrate a greater positive change when compared to those students in experimental population who attend schools where the designated building facilitator does not receive incentive pay. The difference will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared to (1) Measured Information and (2) Measured Abilities for differences in the agreement.

c. When Measured Career Interests are compared to (1) Measured Information and (2) Measured Abilities for absolute movement of change in agreement.

HO_4: Those non-Indian students in the experimental population will demonstrate a greater positive change when compared to the Indian students in the experimental population. The difference will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information, and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for differences in agreement.

c. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for absolute movement of change in agreement.

HO_5: Those Indian students in the experimental population will demonstrate a greater positive change when compared to the Indian students in the control population. The difference

will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared to (1) Measured Information and (2) Measured Abilities for differences in agreement.

c. When Measured Career Interests are compared to (1) Measured Information and (2) Measured Abilities for absolute movement of change in agreement.

The Chi-Square test for two independent samples was employed to determine the significance of differences.

Presentation and Analysis of the Data

Treatment of Raw Data. The raw data on the individual printouts were converted to numerical scores in order to reflect difference and agreement in pre- and post-testing. The numerical values for the pre- and post-test variables were posted to individual two by three contingency tables for easy comparison. From the individual tables the data were posted into collective two by three tables to reflect the total number of observations to be treated under each hypothesis. The total number of observations related to each hypothesis may be examined in Appendix A.

Treatment of Collective Observations. The Chi-Square test of significance was applied to a total of seventy (two x three) contingency tables under five different hypotheses. This permits the determination of significant differences between that which has been observed and that which was expected.

Basic Hypothesis. Those students in the experimental population who have had access to the diagnostic information will demonstrate a greater positive change when compared to those students in the control group who have not had access to the diagnostic information. The difference will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information, and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared to (1) Measured Information and (2) Measured Abilities for differences in agreement.

c. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for absolute movement of change in agreement.

In order to determine the existence of differences in the two populations, the null hypothesis of no difference is tested with the Chi-Square test of significance. If the Chi-Square computation indicates that no differences exist in the expected and the observed, the null hypothesis is accepted. If the Chi-Square hypothesis indicates that a difference does exist between the expected and the observed the null hypothesis of no differences is rejected and a visual examination of the data in the Chi-Square contingency table is made to determine whether the differences are with the experimental or the control group.

The results of the testing of the null hypothesis of no differences between the experimental and control groups are presented in Tables I, II, and III. The numerals in the tables under the headings of "Accept" and "Reject" represent the numbered table in which the computation was made. (See Appendix A for Chi-Square computation.)

TABLE I

A. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information, and (3) Measured Abilities for Agreement.

HO1: Total Population Experimental vs. Control		HO2: Building Facilitator vs. No Building Facilitator		HO3: Paid Building Facilitator vs. No-Pay Facilitator		HO4: Experimental Indians vs. Experimental Non-Indians		HO5: Experimental Indians vs. Control Indians	
Accept	Reject	Accept	Reject	Accept	Reject	Accept	Reject	Accept	Reject
*1,2,3,5	4,6	15,16,18	19,20	29,30,31,32,34	33	43,45,46,47,48	44	57,58,59,60,61	62

An examination of computational tables 4 and 6 reveals that the differences actually reside in the control group rather than the experimental group. In computational tables 19 and 20 the differences do reside in the experimental group. In tables 33 and 44 the differences are divided almost evenly between the experimental and control groups. In table 62 the largest differences are with the control group. With twenty-three (23) acceptances of the null hypothesis of no differences and mixed differences in the tables where it can only be concluded that there are no differences in the control and experimental populations as a result of the experimental treatment.

TABLE II

B. When Measured Career Interests are compared to (1) Measured Information and (2) Measured Abilities for differences in agreement.

HO1: Total Population Experimental vs. Control		HO2: Building Facilitator vs. No Building Facilitator		HO3: Paid Building Facilitator vs. No-Pay Facilitator		HO4: Experimental Indians vs. Experimental Non-Indians		HO5: Experimental Indians vs. Control Indians	
Accept	Reject	Accept	Reject	Accept	Reject	Accept	Reject	Accept	Reject
7,9	8,10	21,22 23,24		35,36 37,38		49,50 51,52		63,56	64,66

An examination of computational tables 8, 10, 64, and 66 reveals that there are differences in the observed and expected in both the control and experimental populations. Based upon the acceptance of the null hypothesis of no differences sixteen (16) times and only four (4) rejections which include differences in both the control and experimental populations, it is concluded that there are no differences between the experimental and control groups.

TABLE THREE

C. When Measured Career Interests are compared to (1) Measured Information and (2) Measured Abilities for absolute movement of change in agreement.

HO1: Total Population Experimental vs. Control		HO2: Building Facilitator vs. No Building Facilitator		HO3: Paid Building Facilitator vs. No-Pay Facilitator		HO4: Experimental Indians vs. Experimental Non-Indians		HO5: Experimental Indians vs. Control Indians	
Accept	Reject	Accept	Reject	Accept	Reject	Accept	Reject	Accept	Reject
14	11,12 13	25,26 28	27	39,40 41,42		53,54 55,56		67,68 69,70	

The differences reflected in the rejected tables 11, 12, and 13 are caused by the cells representing the control group. Table 27 reflects differences in the experimental group. With sixteen (16) acceptances of the null hypothesis of no differences, and with mixed differences of those tables indicating rejection, it can only be concluded that there are no differences between the experimental and control groups.

Summary, Conclusions, and Recommendations

Summary. Both the experimental schools and the control schools were administered the Planning Career Goals early in the fall of 1977 and again in the spring of 1977. The experimental schools were given the results of the pre-tests with the expectation that the classroom teachers would use the information as a diagnostic tool in planning career education experiences.

Seven of the experimental schools had one teacher designated as a Building Facilitator for career and vocational educational activities. Three of the building facilitators were given the opportunity to earn incentive pay through modular production in career education. Two of the three facilitators earned the maximum amount. The third facilitator earned nothing.

Thus, the variables under study were two: (1) the contribution of pre-test diagnostic information related to career decision-making process to counseling and guidance, and (2) the contribution of "incentive pay" for building facilitators based on modular production in activities related to career guidance and counseling.

The population to be studied was originally all seventh, eighth, and ninth grade students in twenty-two schools in Adair and Cherokee counties of northeastern Oklahoma. The population was reduced to the seventh and eighth grade students due to the one-year limitation placed on the study by the funding source. All seventh and eighth grade students were tested and the conclusion was reached that the testing instrument was too difficult for the seventh grade population. It was decided to use only the eighth grade students in the post-testing, which left a potential of 756 students for the study.

The final student count for the study was 501. The attrition was due to a number of factors. Some students moved, and others had provided incomplete responses to career choices.

The raw data from the sub-tests of Interest Inventory, Information Measures, and Ability Measures of Planning Career Goals were converted to numerical values and posted into two by three contingency tables for each individual student. The individual data was posted to a collective two by three contingency table for consideration under the various hypotheses. The data in the two by three contingency tables was treated with the Chi-Square test of significance to determine if there were differences in the observed and expected scores.

The analysis of the data under five different hypothesis and seventy Chi-Square computational tables indicated that there were no significant differences in the experimental and control populations as a result of the experimental treatment.

Conclusion. It is concluded that access to the diagnostic data provided by the testing instrument did not contribute to maturity in decision-making as measured on the post-test. It is also concluded that the presence of building facilitators did not contribute to maturity of decision-making as measured on the post-testing.

The original proposal called for a three-year longitudinal study. This would have allowed more time for maturation and experience to interact with the diagnostic information provided. The post-testing was completed in October and the teachers and students received the diagnostic information by early February. The post-testing was completed during the later part of April and early May. This was not enough time for change to be affected.

Recommendations. The data furnished by the instrument Planning Career Goals should make a significant contribution towards maturity in career decision-making under the right circumstances. It is recommended that the study be duplicated using more mature subjects such as high school sophomores in a longitudinal study reaching to the senior year.

APPENDIX A

COMPUTATIONAL TABLES

APPENDICES

HO_1: The students in the experimental population who have had access to the diagnostic information will demonstrate a greater positive change when compared to the control group who have not had access to the diagnostic information. The difference will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information, and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for differences in agreement.

c. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for absolute movement of change in agreement.

First Expressed Career Choice

Agreement With

#1 Measured Interest

	Pos	Neg	No Change	
Control	A 62	B 41	C 30	133
Accept Exp	D 176	E 97	F 95	368
	238	138	125	501

#2 Measured Information

	Pos	Neg	No Change	
C	47	45	42	
E	171	96	103	

#3 Measured Abilities

	Pos	Neg	No Change
C	63	26	43
E	198	61	106

Second Expressed Career Choice

Agreement With

#4 Measured Interest

	Pos	Neg	No Change
Control	78	35	18
Exp	154	107	88

#5 Measured Information

	Pos	Neg	No Change
C	57	37	33
E	159	89	94

#6 Measured Abilities

	Pos	Neg	No Change
C	55	36	40
E	187	48	98

Highest Measured Career Interest

Differences in Agreement

With

#7 Measured Information

	Pos	Neg	No Change
Control	52	73	31
Exper.	171	152	101

#8 Measured Abilities

	Pos	Neg	No Change
C	42	76	38
E	171	124	113

Second Highest Measured Career Interest

Differences in Agreement

With

#9 Measured Information

	Pos	Neg	No Change
Control	61	63	24
Exper.	158	161	91

#10 Measured Abilities

	Pos	Neg	No Change
C	60	64	24
E	152	139	118

Highest Measured Career Interest

Differences in Agreement

With

#11 Measured Information

	Pos	Neg	No Change
Control	98	35	21
Exper.	212	124	76

#12 Measured Abilities

	Pos	Neg	No Change
C	107	21	27
E	233	88	77

Second Highest Measured Career Interest

Differences in Agreement

With

#13 Measured Information

	Pos	Neg	No Change
Control	89	36	24
Exper.	202	147	63

#14 Measured Abilities

	Pos	Neg	No Change
C	91	34	24
E	220	103	89

TABLE NO. 1

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 62 (63)	B 41 (36)	C 30 (33)	133 ( )	N_1
EXPERIMENTAL	D 176 (175)	E 97 (101)	F 95 (92)	368 ( )	N_2
TOTAL	238	138	125	501	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.015	.694	.273	.005	.158	.098	=

$\Sigma X^2 = 1.24$

(2df) σ = .05 (5.99)

ACCEPT x REJECT _____

TABLE NO. 2

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 47 (58)	B 45 (37)	C 42 (39)	134 (134)	N_1
EXPERIMENTAL	D 171 (60)	E 96 (104)	F 103 (106)	370 (370)	N_2
TOTAL	218	141	145	504	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	2.08	1.73	.230	.756	.615	.084	=

$\Sigma X^2 = 5.50$

(2df) σ = .05 (5.99)

ACCEPT x REJECT _____

TABLE NO. 3

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 63 (69)	B 26 (23)	C 43 (40)	132 (132)	N_1
EXPERIMENTAL	D 198 (192)	E 61 (65)	F 106 (109)	365 (366)	N_2
TOTAL	261	87	149	497	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.521	.391	.225	.187	.246	.082	= 1.65

$\Sigma X^2 = 1.65$

(2df) σ = .05 (5.99)

ACCEPT x REJECT _____

TABLE NO. 4

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 78 (63)	B 35 (39)	C 18 (29)	131 (131)	N_1
EXPERIMENTAL	D 154 (169)	E 107 (103)	F 88 (77)	349 (349)	N_2
TOTAL	232	142	106	480	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
3.57	.410	4.17	1.33	.155	1.57	= 11.20

$$\Sigma X^2 = 11.20$$

$(2df)\ \sigma = .05\ (5.99)$

ACCEPT _____ REJECT x

TABLE NO. 5

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 57 (58)	B 37 (34)	C 33 (34)	127 (126)	N_1
EXPERIMENTAL	D 159 (158)	E 89 (92)	F 94 (93)	342 (343)	N_2
TOTAL	216	126	127	469	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.017	.264	.029	.006	.097	.010	= .423

$$\Sigma X^2 = .423$$

(2df) σ = .05 (5.99)

ACCEPT x REJECT ____

TABLE NO. 6

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 55 (68)	B 36 (24)	C 40 (39)	131 (131)	N_1
EXPERIMENTAL	D 187 (174)	E 48 (60)	F 98 (99)	333 (333)	N_2
TOTAL	242	84	138	464	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	2.49	6.0	.025	.97	2.4	.010	= 11.90

$\Sigma X^2 = 11.90$

(2df) σ = .05 (5.99)

ACCEPT_____ REJECT x

TABLE NO. 7

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 52 (60)	B 73 (61)	C 31 (36)	156 (257)	N_1
EXPERIMENTAL	D 171 (163)	E 152 (164)	F 101 (96)	424 (42)	N_2
TOTAL	223	225	132	580	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
1.06	2.36	.694	.392	.390	.260	= 5.16

$\Sigma X^2 = 5.16$

(2df) σ = .05 (5.99)

ACCEPT x REJECT _____

TABLE NO. 8

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 42 (59)	B 76 (55)	C 38 (42)	156 (156)	N_1
EXPERIMENTAL	D 171 (154)	E 124 (145)	F 113 (109)	408 (408)	N_2
TOTAL	213	200	151	564	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	4.9	10.47	.38	1.88	3.04	.146	= 20.81

$\Sigma X^2 = 20.81$

(2df) α = .05 (5.99)

ACCEPT _____ REJECT x

TABLE NO. 9

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 61 (58)	B 63 (59)	C 24 (31)	148 (148)	N_1
EXPERIMENTAL	D 158 (161)	E 161 (165)	F 91 (84)	410 (410)	N_2
TOTAL	219	224	115	558	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F
.155	.271	.087	.055	.096	2.01

$X^2 = 2.67$

$\Sigma X^2 = 2.67$

(2df) σ = .05 (5.99)

ACCEPT x

REJECT _____

TABLE NO. 10

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 60 (56)	B 64 (54)	C 24 (38)	148 (148)	N_1
EXPERIMENTAL	D 152 (156)	E 139 (149)	F 118 (104)	409 ( )	N_2
TOTAL	212	203	142	557	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.285	1.85	5.16	.102	.671	1.88	= 9.94

$$\Sigma X^2 = 9.94$$

(2df) σ = .05 (5.99)

15

ACCEPT _____ REJECT X

TABLE NO. 11

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 98 (84)	B 35 (43)	C 21 (26)	154 (153)	N_1
EXPERIMENTAL	D 212 (226)	E 124 (116)	F 76 (71)	412 (413)	N_2
TOTAL	310	159	97	566	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
2.33	1.88	.961	.867	.551	.352	= 6.94

$\Sigma X^2 = 6.94$

(2df) σ = .05 (5.99)

ACCEPT _____ REJECT x

TABLE NO. 12

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 107 (95)	B 21 (31)	C 27 (29)	155 (155)	N_1
EXPERIMENTAL	D 233 (245)	E 88 (78)	F 77 (75)	398 (398)	N_2
TOTAL	340	109	104	553	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F
1.51	3.22	.013	.587	1.28	.053

$X^2 =$ =

$\Sigma X^2 = 6.67$

(2df) σ = .05 (5.99)

ACCEPT _____ REJECT X

TABLE NO. 13

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 89 (77)	B 36 (49)	C 24 (23)	149 (149)	N_1
EXPERIMENTAL	D 202 (214)	E 147 (134)	F 63 (64)	412 (412)	N_2
TOTAL	291	183	87	561	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
1.87	3.44	.043	.672	1.26	.015	= 7.3

$\Sigma X^2 =$

(2df) σ = .05 (5.99)

ACCEPT _____ REJECT x

TABLE NO. 14

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 91 (83)	B 34 (36)	C 24 (30)	149 (149)	N_1
EXPERIMENTAL	D 220 (228)	E 103 (101)	F 89 (83)	412 (412)	N_2
TOTAL	311	137	113	561	N

COMPUTATION OF EXPECTED

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

χ^2 =

A	B	C	D	E	F
.77	.111	1.2	.280	.039	.433

= 2.83

$\Sigma \chi^2 =$

(2df) σ = .05 (5.99)

ACCEPT x REJECT ____

HO_2: The students in the experimental population who attend schools where a building facilitator has been designated will demonstrate a greater positive change when compared to those students in the experimental population who attend schools where a building facilitator has not been designated. The difference will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information, and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for differences in agreement.

c. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for absolute movement of change in agreement.

First Expressed Career Choice

Agreement With

#15 Measured Interest

	Pos	Neg	No Change
Control	119	75	56
Exp	79	29	39

#16 Measured Information

	Pos	Neg	No Change
C	118	55	67
E	69	41	36

#17 Measured Abilities

	Pos	Neg	No Change
C	121	34	65
E	77	27	41

Second Expressed Career Choice

Agreement With

#18 Measured Interest

	Pos	Neg	No Change
Control	85	66	50
Exp	69	41	38

#19 Measured Information

	Pos	Neg	No Change
C	82	68	59
E	77	31	35

#20 Measured Abilities

	Pos	Neg	No Change
C	103	27	70
E	84	31	28

Highest Measured Career Interest

Differences in Agreement

With

	#21 Measured Information				#22 Measured Abilities		
	Pos	Neg	No Change		Pos	Neg	No Change
Control	102	93	71	C	108	69	75
Exper.	69	59	30	E	63	55	38

Second Highest Measured Career Interest

Differences in Agreement

With

	#23 Measured Information				#24 Measured Abilities		
	Pos	Neg	No Change		Pos	Neg	No Change
Control	98	98	60	C	97	81	76
Exper.	60	63	31	E	55	58	42

Highest Measured Career Interest

Differences in Agreement

With

#25 Measured Information

	Pos	Neg	No Change
Control	121	99	46
Exper.	89	35	30

#26 Measured Abilities

	Pos	Neg	No Change
C	143	58	53
E	90	30	24

Second Highest Measured Career Interest

Differences in Agreement

With

#27 Measured Information

	Pos	Neg	No Change
Control	112	99	45
Exper.	90	48	18

#28 Measured Abilities

	Pos	Neg	No Change
C	135	66	55
E	85	37	34

TABLE NO. 15

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 119 (125)	B 75 (65)	C 56 (60)	250 (250)	N_1
EXPERIMENTAL	D 79 (73)	E 29 (39)	F 39 (35)	147 (147)	N_2
TOTAL	198	104	95	397	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.288	1.54	.266	.493	2.56	.457	= 5.60

$\Sigma X^2 = 5.60$

(2df) σ = .05 (5.99)

ACCEPT X REJECT ____

TABLE NO. 16

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 118 (116)	B 55 (60)	C 67 (64)	240 (240)	N_1
EXPERIMENTAL	D 69 (71)	E 41 (36)	F 36 (39)	146 (146)	N_2
TOTAL	187	96	103	386	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.034	.416	.140	.901	.694	.230	= 2.42

$\sum X^2 = 2.42$

(3df) σ = .05 (5.99)

ACCEPT x REJECT _____

TABLE NO. 17

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 121 (119)	B 34 (37)	C 65 (64)	220 (220)	N_1
EXPERIMENTAL	D 77 (79)	E 27 (24)	F 41 (42)	145 (145)	N_2
TOTAL	198	61	106	365	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.033	.243	.015	.050	.375	.023	= .739

$\Sigma X^2 = .739$

$(2df)\ \sigma = .05\ (5.99)$

ACCEPT x REJECT _____

TABLE NO. 18

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 85 (89)	B 66 (62)	C 50 (51)	201 (202)	N_1
EXPERIMENTAL	D 69 (65)	E 41 (45)	F 38 (37)	148 (147)	N_2
TOTAL	154	107	88	349	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.179	.258	.019	.246	.355	.027	= 1.08

$\Sigma X^2 = 1.08$

(2df) σ = .05 (5.99)

ACCEPT X REJECT

HO_3: Those students in the experimental population who attend schools where the designated building facilitator receives incentive pay will demonstrate a greater positive change when compared to those students in experimental population who attend schools where the designated building facilitator does not receive incentive pay. The difference will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information, and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for differences in agreement.

c. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for absolute movement of change in agreement.

Exp = Paid Facilitator
Control = Facilitator

First Expressed Career Choice

Agreement With

#29 Measured Interest

	Pos	Neg	No Change
Control	34	15	19
Exp	45	14	20

#30 Measured Information

	Pos	Neg	No Change
C	30	18	20
E	39	23	16

#31. Measured Abilities

	Pos	Neg	No Change
C	35	14	18
E	42	13	23

Second Expressed Career Choice

Agreement With

#32 Measured Interest

	Pos	Neg	No Change
Control	28	25	14
Exp	41	16	24

#33 Measured Information

	Pos	Neg	No Change
C	28	14	22
E	49	17	13

#34 Measured Abilities

	Pos	Neg	No Change
C	39	13	14
E	45	18	14

Highest Measured Career Interest

Differences in Agreement

With

	#35 Measured Information				#36 Measured Abilities		
	Pos	Neg	No Change		Pos	Neg	No Change
Control	45	26	12	C	31	23	16
Exper.	34	33	18	E	32	32	22

Second Highest Measured Career Interest

Differences in Agreement

With

	#37 Measured Information				#38 Measured Abilities		
	Pos	Neg	No Change		Pos	Neg	No Change
Control	28	26	16	C	28	22	21
Exper.	32	37	15	E	27	36	21

Highest Measured Career Interest

Differences in Agreement

With

	#39 Measured Information				#40 Measured Abilities		
	Pos	Neg	No Change		Pos	Neg	No Change
Control	51	21	20	C	51	16	12
Exper.	54	14	18	E	53	14	12

Second Highest Measured Career Interest

Differences in Agreement

With

	#41 Measured Information				#41 Measured Abilities		
	Pos	Neg	No Change		Pos	Neg	No Change
Control	36	27	9	C	36	16	20
Exper.	54	21	9	E	49	21	14

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 82 (94)	B 68 (59)	C 59 (56)	209 (209)	N_1
EXPERIMENTAL	D 77 (65)	E 31 (40)	F 35 (38)	143 (143)	N_2
TOTAL	159	99	94	352	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	1.53	1.37	.160	2.21	2.02	.236	= 7.52

$\Sigma X^2 = 7.52$

(2df) σ = .05 (5.99)

ACCEPT _____ REJECT X

TABLE NO. 20

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 103 (109)	B 27 (34)	C 70 (57)	200 (190)	N_1
EXPERIMENTAL	D 84 (78)	E 31 (24)	F 28 (41)	143 (143)	N_2
TOTAL	187	58	98	343	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.330	1.44	2.96	.461	2.04	4.12	=

$\sum X^2 = 11.35$

(2df) σ = .05 (5.99)

ACCEPT _____ REJECT X

TABLE NO. 21

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 102 (107)	B 93 (95)	C 71 (63)	266 (265)	N_1
EXPERIMENTAL	D 69 (64)	E 59 (57)	F 30 (38)	158 (159)	N_2
TOTAL	171	152	101	424	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.233	.042	1.01	.390	.070	1.68	= 3.42

$$\Sigma X^2 = 3.42$$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 22

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 108 (106)	B 69 (77)	C 75 (70)	252 (253)	N_1
EXPERIMENTAL	D 63 (65)	E 55 (47)	F 38 (43)	156 (155)	N_2
TOTAL	171	124	113	408	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.03	1.87	.357	.061	1.36	.581	= 4.25

$$\Sigma X^2 = 4.25$$

$(2df)\ \sigma = .05\ (5.99)$

ACCEPT X REJECT ____

TABLE NO. 23

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 98 (99)	B 98 (101)	C 60 (57)	256 (257)	N_1
EXPERIMENTAL	D 60 (59)	E 63 (60)	F 31 (34)	154 (153)	N_2
TOTAL	158	161	91	410	N

COMPUTATION OF EXPECTED

$$x^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.010	.089	.157	.016	.15	.264	= .686

$\Sigma x^2 = .686$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 24

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 97 (94)	B 81 (86)	C 76 (73)	254 (253)	N_1
EXPERIMENTAL	D 55 (58)	E 58 (53)	F 42 (45)	155 (156)	N_2
TOTAL	152	139	118	409	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.095	.290	.123	.155	.471	.2	= 1.13

$$\Sigma X^2 = 1.13$$

(2df) α = .05 (5.99)

ACCEPT X

REJECT

TABLE NO. 25

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 121 (133)	B 99 (93)	C 45 (40)	265 (266)	N_1
EXPERIMENTAL	D 90 (78)	E 48 (54)	F 18 (23)	156 (155)	N_2
TOTAL	211	147	63	421	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

$X^2 =$

A	B	C	D	E	F
1.08	.387	.625	1.84	.666	1.08

$= 5.68$

$\Sigma X^2 = 5.68$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 26

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 143 (149)	B 58 (56)	C 53 (49)	254 (254)	N_1
EXPERIMENTAL	D 90 (84)	E 30 (32)	F 24 (28)	144 (144)	N_2
TOTAL	233	88	77	398	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.241	.071	.326	.428	.125	.571	= 1.76

$\Sigma X^2 = 1.76$

(2df) $\sigma = .05$ (5.99)

ACCEPT X REJECT

TABLE NO. 27

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 112 (126)	B 99 (91)	C 45 (39)	256 (256)	N_1
EXPERIMENTAL	D 90 (76)	E 48 (56)	F 18 (24)	156 (156)	N_2
TOTAL	202	147	63	412	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	1.55	.70	.923	2.57	1.14	1.5	= 8.38

$\Sigma X^2 = 8.38$

(2df) σ = .05 (5.99)

ACCEPT _____ REJECT X

TABLE NO. X28

COMPUTATION OF EXPECTED

$$E_A = \frac{A \cdot D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 135 (137)	B 66 (64)	C 55 (55)	256 (256)	N_1
EXPERIMENTAL	D 85 (83)	E 37 (39)	F 34 (34)	156 (156)	N_2
TOTAL	220	103	89	412	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.029	.062	0	.048	.102	0	= .241

$$\Sigma X^2 = .241$$

(2df) σ = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 29

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 34 (36)	B 15 (13)	C 19 (18)	68 (69)	N_1
EXPERIMENTAL	D 45 (42)	E 14 (15)	F 20 (21)	79 (78)	N_2
TOTAL	79	29	39	147	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.111	.307	.05	.214	.066	.047	= .795

$\Sigma X^2 = .795$

(2df) σ = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 30

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} \cdot (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 30 (32)	B 18 (19)	C 20 (17)	68 (68)	N_1
EXPERIMENTAL	D 39 (37)	E 23 (22)	F 16 (19)	78 (78)	N_2
TOTAL	69	41	36	146	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.125	.052	.529	.108	.045	.052	= .911

$$\Sigma X^2 = .911$$

(2df) σ = .05 (5.99)

ACCEPT X

REJECT

TABLE NO. 31

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 35 (36)	B 14 (12)	C 18 (19)	67 (67)	N_1
EXPERIMENTAL	D 42 (41)	E 13 (15)	F 23 (22)	78 (78)	N_2
TOTAL	77	27	41	145	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.027	.333	.052	.024	.266	.045	.747

$$\Sigma X^2 = .747$$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 32

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 28 (31)	B 25 (19)	C 14 (17)	67 (67)	N_1
EXPERIMENTAL	D 41 (38)	E 16 (22)	F 24 (21)	81 (81)	N_2
TOTAL	69	41	38	148	N

COMPUTATION OF EXPECTED

$$= \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.290	1.89	.529	.236	1.63	.428	= 5.00

$\sum \chi^2 = 5.00$

(2dF) (.) = .05 (5.99)

ACCEPT X

REJECT _____

TABLE NO. 33

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 28 (34)	B 14 (14)	C 22 (16)	64 (64)	N_1
EXPERIMENTAL	D 49 (43)	E 17 (17)	F 13 (19)	79 (79)	N_2
TOTAL	77	31	35	143	N

COMPUTATION OF EXPECTED

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
1.05	0	2.25	.837	0	1.89	= 6.02

$\Sigma \chi^2 =$ 6.02

(2df) σ = .05 (5.99)

ACCEPT _____ REJECT X

TABLE NO. 34

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 39 (39)	B 13 (14)	C 14 (13)	66 (66)	N_1
EXPERIMENTAL	D 45 (45)	E 18 (17)	F 14 (15)	77 (77)	N_2
TOTAL	84	31	28	143	N

COMPUTATION OF EXPECTED

$$\sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
X^2 = 0	.071	.076	0	.058	.066	= .271

$\Sigma X^2 = .271$

(2df) σ = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 35

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 45 (39)	B 26 (29)	C 12 (15)	83 (83)	N_1
EXPERIMENTAL	D 34 (40)	E 33 (30)	F 18 (15)	85 (85)	N_2
TOTAL	79	59	30	168	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.923	.310	.6	.9	.3	.6	= 3.63

$\Sigma X^2 = 3.63$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 36

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE.	TOTAL	
CONTROL	A 31 (27)	B 23 (23)	C 16 (20)	70 (70)	N_1
EXPERIMENTAL	D 32 (36)	E 32 (32)	F 32 (28)	96 (96)	N_2
TOTAL	63	55	48	166	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.592	0	.8	.444	0	.571	= 2.40

$\Sigma X^2 = 2.40$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 37

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 28 (27)	B 26 (29)	C 16 (14)	70 (70)	N_1
EXPERIMENTAL	D 32 (33)	E 37 (34)	F 15 (17)	84 (84)	N_2
TOTAL	60	63	31	154	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.037	.310	.285	.030	.264	.235	= 1.16

$\Sigma X^2 = 1.16$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 38

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 28 (25)	B 22 (27)	C 21 (19)	71 (70)	N_1
EXPERIMENTAL	D 27 (30)	E 36 (31)	F 21 (23)	84 (84)	N_2
TOTAL	55	58	42	155	N

COMPUTATION OF EXPECTED

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.36	.925	.210	.3	.806	.173	= 2.60

$\Sigma \chi^2 = 2.60$

(2df) σ = .05 (5.99)

ACCEPT x REJECT _____

TABLE NO. 39

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 51 (54)	B 21 (18)	C 20 (20)	92 (92)	N_1
EXPERIMENTAL	D 54 (51)	E 14 (17)	F 18 (18)	86 (86)	N_2
TOTAL	105	35	38	178	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.16	.5	0	.176	.529	0	= 1.36

$\Sigma X^2 = 1.36$

(2df) σ = .05 (5.99)

ACCEPT X

REJECT

TABLE NO. 40

COMPUTATION OF EXPECTED

$$E_A = \frac{A \cdot D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 51 (52)	B 16 (15)	C 12 (12)	79 (79)	N_1
EXPERIMENTAL	D 53 (52)	E 14 (15)	F 12 (12)	79 (79)	N_2
TOTAL	104	30	24	158	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.019	.066	0	.019	.066	0	= .17

X^2 =

$\Sigma X^2 = .17$

(2df) .05 (5.99)

ACCEPT X REJECT

TABLE NO. 41

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 36 (42)	B 27 (22)	C 9 (8)	72 (72)	N_1
EXPERIMENTAL	D 54 (48)	E 21 (26)	F 9 (10)	84 (84)	N_2
TOTAL	90	48	18	156	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.857	1.13	.125	.75	.96	.1	= 4.65

$\Sigma X^2 = 4.65$

(2df) σ = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 42

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 36 (39)	B 16 (17)	C 20 (16)	72 (72)	N_1
EXPERIMENTAL	D 49 (46)	E 21 (20)	F 14 (18)	84 (84)	N_2
TOTAL	85	37	34	156	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.23	.058	1.	.195	.05	.888	= 2.42

$\Sigma X^2 = 2.42$

(2df) σ = .05 (5.99)

ACCEPT X

REJECT

HO_4: Those non-Indian students in the experimental population will demonstrate a greater positive change when compared to the Indian students in the experimental population. The difference will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information, and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for differences in agreement.

c. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for absolute movement of change in agreement.

Control = Non-Indian
Exp = Indian

First Expressed Career Choice

Agreement With

#43 Measured Interest

	Pos	Neg	No Change
Control	87	40	41
Exp	89	57	54

#44 Measured Information

	Pos	Neg	No Change
C	85	33	50
E	86	63	53

#45 Measured Abilities

	Pos	Neg	No Change
C	93	26	46
E	105	35	60

Second Expressed Career Choice

Agreement With

#46 Measured Interest

	Pos	Neg	No Change
Control	69	45	44
Exp	85	62	44

#47 Measured Information

	Pos	Neg	No Change
C	68	44	44
E	91	45	50

#48 Measured Abilities

	Pos	Neg	No Change
C	84	22	48
E	103	26	50

Highest Measured Career Interest

Differences in Agreement

With

#49 Measured Information

	Pos	Neg	No Change
Control	78	64	45
Exper.	93	88	56

#50 Measured Abilities

	Pos	Neg	No Change
C	76	54	52
E	95	70	61

Second Highest Measured Career Interest

Differences in Agreement

With

#51 Measured Information

	Pos	Neg	No Change
Control	73	64	48
Exper.	85	97	43

#52 Measured Abilities

	Pos	Neg	No Change
C	68	62	54
E	84	77	64

Highest Measured Career Interest

Differences in Agreement

With

	#53 Measured Information				#54 Measured Abilities		
	Pos	Neg	No Change		Pos	Neg	No Change
Control	90	56	39	C	109	37	34
Exper.	122	68	37	E	124	51	43

Second Highest Measured Career Interest

Differences in Agreement

With

	#55 Measured Information				#56 Measured Abilities		
	Pos	Neg	No Change		Pos	Neg	No Change
Control	91	65	28	C	101	46	39
Exper.	111	82	35	E	119	57	50

TABLE NO. 43

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 87 (80)	B 40 (44)	C 41 (43)	168 (167)	N_1
EXPERIMENTAL	D 89 (96)	E 57 (53)	F 54 (52)	200 (201)	N_2
TOTAL	176	97	95	368	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.61	.363	.09	.51	.30	.07	= 2.46

$\Sigma X^2 = 2.46$

(2df) σ = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 44

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 85 (78)	B 33 (44)	C 50 (47)	168 (169)	N_1
EXPERIMENTAL	D 86 (93)	E 63 (52)	F 53 (56)	202 (201)	N_2
TOTAL	171	96	103	370	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.62	2.71	.19	.526	2.32	.16	= 6.52

$\Sigma X^2 = 6.52$

(2df) σ = .05 (5.99)

ACCEPT_____ REJECT X

TABLE NO. 45

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 93 (90)	B 26 (28)	C 46 (48)	165 (166)	N_1
EXPERIMENTAL	D 105 (108)	E 35 (33)	F 60 (58)	200 (199)	N_2
TOTAL	198	61	106	365	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.1	.14	.33	.08	.12	.06	= .83

ΣX^2 =

(2df) σ = .05 (5.99)

ACCEPT X REJECT ____

TABLE NO. 46

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)\ ($$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 69 (70)	B 45 (48)	C 44 (40)	158 (158)	N_1
EXPERIMENTAL	D 85 (84)	E 62 (59)	F 44 (48)	191 (191)	N_2
TOTAL	154	107	88	349	N

COMPUTATION OF EXPECTED

$$x^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.014	.187	.4	.011	.152	.33	= 1.09

$$\sum x^2 = 1.09$$

(2df) σ = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 47

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 68 (73)	B 44 (41)	C 44 (43)	156 (157)	N_1
EXPERIMENTAL	D 91 (86)	E 45 (48)	F 50 (51)	186 (185)	N_2
TOTAL	159	89	94	342	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.34	.21	.02	.29	.18	.019	= 1.05

$\Sigma X^2 = 1.05$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 48

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 84 (86)	B 22 (22)	C 48 (45)	154 (153)	N_1
EXPERIMENTAL	D 103 (101)	E 26 (26)	F 50 (53)	179 (180)	N_2
TOTAL	187	48	98	333	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.04	0	.2	.03	0	.169	= .439

$$\Sigma X^2 = .439$$

(2df) σ = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 49

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 78 (75)	B 64 (67)	C 45 (45)	187 (187)	N_1
EXPERIMENTAL	D 93 (96)	E 88 (85)	F 56 (56)	237 (237)	N_2
TOTAL	171	152	101	424	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.12	.13	0	.09	.105	0	= .445

$\Sigma X^2 = .445$

(2df) σ = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 50

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 76 (76)	B 54 (55)	C 52 (50)	182 (181)	N_1
EXPERIMENTAL	D 95 (95)	E 70 (69)	F 61 (63)	226 (227)	N_2
TOTAL	171	124	113	408	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
0	.018	.08	0	.01	.06	= .168

$$\Sigma X^2 = .168$$

(2df) σ = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 51

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 73 (71)	B 64 (73)	C 48 (41)	185 (185)	N_1
EXPERIMENTAL	D 85 (87)	E 97 (88)	F 43 (50)	225 (225)	N_2
TOTAL	158	161	91	410	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.05	1.10	1.19	.04	.92	.98	= 4.28

$$\Sigma X^2 = 4.28$$

(2df) σ = .05 (5.99)

ACCEPT X

REJECT

TABLE NO. 52

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_i)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 68 (68)	B 62 (63)	C 54 (53)	184 (184)	N_1
EXPERIMENTAL	D 84 (84)	E 77 (76)	F 64 (65)	225 (225)	N_2
TOTAL	152	139	118	409	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
0	.01	.01	0	.01	.01	= .04

$\Sigma X^2 = .04$

(2df) .05 (5.99)

ACCEPT X REJECT ____

TABLE NO. 53

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 90 (95)	B 56 (56)	C 39 (34)	185 (185)	N_1
EXPERIMENTAL	D 122 (117)	E 68 (68)	F 37 (42)	227 (227)	N_2
TOTAL	212	124	76	412	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.26	0	.73	.21	0	.59	= 1.79

$\Sigma X^2 = 1.79$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 54

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 109 (105)	B 37 (40)	C 34 (35)	180 (180)	N_1
EXPERIMENTAL	D 124 (128)	E 51 (48)	F 43 (42)	218 (218)	N_2
TOTAL	233	88	77	398	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.15	.22	.02	.12	.18	.02	= .071

$$\Sigma X^2 = .071$$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 55

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 91 (90)	B 65 (66)	C 28 (28)	184 (184)	N_1
EXPERIMENTAL	D 111 (112)	E 82 (81)	F 35 (35)	228 (228)	N_2
TOTAL	202	147	63	412	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.01	.015	0	.008	.01	0	= .04

$$\Sigma X^2 = .04$$

(2df) .05 (5.99)

ACCEPT X REJECT

TABLE NO. 56

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 101 (99)	B 46 (47)	C 39 (40)	186 (186)	N_1
EXPERIMENTAL	D 119 (121)	E 57 (56)	F 50 (49)	226 (226)	N_2
TOTAL	220	103	89	412	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.04	.02	.02	.03	.01	.02	= .14

$\Sigma X^2 = .14$

(2df) σ = .05 (5.99)

ACCEPT X

REJECT _____

HO_5: Those Indian students in the experimental population will demonstrate a greater positive change when compared to the Indian students in the control population. The difference will be significant at the .05 level of confidence when comparisons are made in the following areas:

a. When Expressed Career Choices are compared to (1) Measured Interests, (2) Measured Information, and (3) Measured Abilities for agreement.

b. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for differences in agreement.

c. When Measured Career Interests are compared to (1) Measured Information, and (2) Measured Abilities for absolute movement of change in agreement.

First Expressed Career Choice

Agreement With

#57 Measured Interest

	Pos	Neg	No Change
Control	38	26	13
Exp	89	57	54

#58 Measured Information

	Pos	Neg	No Change
C	27	29	22
E	86	63	53

#59 Measured Abilities

	Pos	Neg	No Change
C	37	14	25
E	105	35	60

Second Expressed Career Choice

Agreement With

#60 Measured Interest

	Pos	Neg	No Change
Control	42	23	11
Exp	85	62	44

#61 Measured Information

	Pos	Neg	No Change
C	30	18	22
E	91	45	50

#62 Measured Abilities

	Pos	Neg	No Change
C	26	24	25
E	103	26	50

Highest Measured Career Interest

Differences in Agreement

With

#63 Measured Information

	Pos	Neg	No Change
Control	35	43	17
Exper.	93	88	56

#64 Measured Abilities

	Pos	Neg	No Change
C	24	44	26
E	95	70	61

Second Highest Measured Career Interest

Differences in Agreement

With

#65 Measured Information

	Pos	Neg	No Change
Control	38	37	15
Exper.	85	97	43

#66 Measured Abilities

	Pos	Neg	No Change
C	34	42	15
E	84	77	64

Highest Measured Career Interest

Differences in Agreement

With

#67 Measured Information

	Pos	Neg	No Change
Control	56	24	13
Exper.	122	68	37

#68 Measured Abilities

	Pos	Neg	No Change
C	59	15	19
E	124	51	43

Second Highest Measured Career Interest

Differences in Agreement

With

#69 Measured Information

	Pos	Neg	No Change
Control	50	25	15
Exper.	111	82	35

#70 Measured Abilities

	Pos	Neg	No Change
C	49	26	15
E	119	57	50

TABLE NO. 57

COMPUTATION OF EXPECTED

$$E_A = \frac{A + B}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 38 (35)	B 26 (23)	C 13 (19)	77 (77)	N_1
EXPERIMENTAL	D 89 (92)	E 57 (60)	F 54 (48)	200 (200)	N_2
TOTAL	127	83	67	277	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.25	.39	1.89	.09	.015	.75	= 2.63

$$\Sigma X^2 = 2.63$$

$(2df)\ \sigma = .05\ (5.99)$

ACCEPT X REJECT

TABLE NO. 58

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 27 (31)	B 29 (26)	C 22 (21)	78 (78)	N_1
EXPERIMENTAL	D 86 (82)	E 63 (66)	F 53 (54)	202 (202)	N_2
TOTAL	113	92	75	280	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.51	.34	.04	.19	.13	.018	= 1.22

$$\Sigma X^2 = 1.22$$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 59

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 35 (39)	B 14 (13)	C 25 (23)	76 (75)	N_1
EXPERIMENTAL	D 105 (103)	E 35 (36)	F 60 (62)	200 (201)	N_2
TOTAL	142	49	85	276	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.10	.07	.17	.03	.02	.06	= .045

$\Sigma X^2 = .045$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 60

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\cdot(N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 42 (36)	B 23 (24)	C 11 (16)	76 (76)	N_1
EXPERIMENTAL	D 85 (91)	E 62 (61)	F 44 (39)	191 (191)	N_2
TOTAL	127	85	55	267	N

COMPUTATION OF EXPECTED

$$x^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
1.0	.04	1.56	.39	.016	.64	= 3.6

$\Sigma x^2 = 3.6$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 61

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)(N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 30 (33)	B 18 (17)	C 22 (20)	70 (70)	N_1
EXPERIMENTAL	D 91 (88)	E 45 (46)	F 50 (52)	186 (186)	N_2
TOTAL	121	63	72	256	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.27	.05	.2	.1	.02	.07	= .71

$$\Sigma X^2 = .71$$

(2df) .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 62

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 26 (38)	B 24 (15)	C 25 (22)	75 (75)	N_1
EXPERIMENTAL	D 103 (91)	E 26 (35)	F 50 (53)	179 (179)	N_2
TOTAL	129	50	75	254	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
3.78	5.4	.4	1.58	2.3	.16	= 13.62

$\Sigma X^2 = 13.62$

(2df) σ = .05 (5.99)

ACCEPT_____ REJECT X

TABLE NO. 63

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 35 (37)	B 43 (37)	C 17 (21)	95 (95)	N_1
EXPERIMENTAL	D 93 (91)	E 88 (94)	F 56 (52)	237 (237)	N_2
TOTAL	128	131	73	332	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.10	.97	.76	.04	.38	.30	= 2.55

$$\Sigma X^2 = 2.55$$

(2df) .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 64

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 24 (35)	B 44 (33)	C 26 (26)	94 (94)	N_1
EXPERIMENTAL	D 95 (84)	E 70 (81)	F 61 (61)	226 (226)	N_2
TOTAL	119	114	87	320	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
3.45	3.66	0	1.44	1.49	0	= 10.04

$$\Sigma X^2 = 10.04$$

(2df) σ = .05 (5.99)

ACCEPT _____ REJECT ___X___

TABLE NO. 65

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 38 (35)	B 37 (38)	C 15 (17)	90 (90)	N_1
EXPERIMENTAL	D 85 (88)	E 97 (96)	F 43 (44)	225 (225)	N_2
TOTAL	123	134	58	315	N

COMPUTATION OF EXPECTED

$$\sum \frac{(O \quad E)^2}{E}$$

A	B	C	D	E	F	
.25	.02	.23	.10	.01	.09	= .7

$$\chi^2 = .7$$

(2df) α = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 66

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 34 (34)	B 42 (34)	C 15 (23)	91 (91)	N_1
EXPERIMENTAL	D 84 (84)	E 77 (85)	F 64 (56)	225 (225)	N_2
TOTAL	118	119	79	316	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

X^2 =

A	B	C	D	E	F	
0	1.88	2.78	0	.75	2.57	= 7.98

$\Sigma X^2 = 7.98$

(2df) σ = .05 (5.99)

ACCEPT_____ REJECT __X__

TABLE NO. 67

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 56 (51)	B 24 (27)	C 13 (15)	93 (93)	N_1
EXPERIMENTAL	D 122 (126)	E 68 (65)	F 37 (35)	227 (223)	N_2
TOTAL	178	92	50	320	N

COMPUTATION OF EXPECTED

$$\sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.49	.33	.26	.12	.13	.11	= 1.44

$$\chi^2 = 1.44$$

(2df) α = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 68

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 59 (55)	B 15 (20)	C 19 (19)	93 (94)	N_1
EXPERIMENTAL	D 124 (128)	E 51 (46)	F 43 (43)	218 (217)	N_2
TOTAL	183	66	62	311	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

	A	B	C	D	E	F	
X^2 =	.29	1.25	0	.125	.54	0	= 2.20

$\Sigma X^2 = 2.20$

(2df) σ = .05 (5.99)

ACCEPT X REJECT _____

TABLE NO. 69

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 50 (46)	B 25 (30)	C 15 (14)	90 (90)	N_1
EXPERIMENTAL	D 111 (115)	E 82 (77)	F 35 (36)	228 (228)	N_2
TOTAL	161	107	50	318	N

COMPUTATION OF EXPECTED

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.34	.83	.07	.139	.32	.027	= 1.72

$\chi^2 = 1.72$

(2dF) α = .05 (5.99)

ACCEPT X REJECT

TABLE NO. 70

COMPUTATION OF EXPECTED

$$E_A = \frac{A + D}{N} = (X_1)\ (N_1)$$

	POS	NEG	NO CHANGE	TOTAL	
CONTROL	A 49 (48)	B 26 (24)	C 15 (19)	90 (91)	N_1
EXPERIMENTAL	D 119 (120)	E 57 (59)	F 50 (46)	226 (225)	N_2
TOTAL	168	83	65	316	N

COMPUTATION OF EXPECTED

$$X^2 = \sum \frac{(O - E)^2}{E}$$

A	B	C	D	E	F	
.02	.86	.84	.008	.067	.347	= 2.14

$$\Sigma X^2 = 2.14$$

$(2df)\ \sigma = .05\ (5.99)$

ACCEPT X REJECT _____

APPENDIX B

CHRONOLOGICAL TIMELINE

Chronological Timeline

October 31, 1977 . . . . . .Testing was completed.

November 7, 1977. . . . . .Tests mailed to California Test Bureau for scoring.

November 28, 1977. . . . . .Test results were received from CTB. They could not be distributed at this time because many schools were dismissing within ten days for Christmas vacation or were practicing for Christmas programs, etc.

February 1, 1978 . . . . . .All test results have been returned to the teachers in the experimental schools for diagnostic counseling with the students. Inclement weather and school closings prevented the distribution before this time.

February 15, 1978 . . . . . .The revised evaluation design and program report submitted to the office of vocational education.

May 1, 1978 . . . . . .All post-testing to be completed.

June 1, 1978. . . . . .Results of scoring should be received from CTB.

December 1, 1978. . . . . .Analysis of data should be completed. (This is to be done by hand.) Preliminary draft of report should be completed.

December 31, 1978. . . . . .Final draft of report should be completed.

APPENDIX C

MODULAR SCHEDULE
FOR
BUILDING COORDINATORS

BUILDING COORDINATORS FOR CAREER EDUCATION

A teacher will be identified in each of the experimental schools to serve as a facilitator. This should be a person interested in vocational education with some ability to influence others.

An incentive program will be outlined to the facilitator as follows:

1. Attendance of the coordinator at the inservice training sessions for coordinators; maximum of six (6) days at $20 ..... $120
2. Dissemination of relevant vocational information, supplies, materials and equipment to teachers, 180 days x $2 360
3. Establishment and utilization of Student Career Education Committee; minimum of three (3) meetings 30
4. Establishment and utilization of Student Cultural Education Committee; minimum of three (3) meetings 30
5. Establishment and utilization of a Career Parent Committee; minimum of three (3) meetings 30
6. Establishment and utilization of a Cultural Parent Committee; minimum of three (3) meetings 30
7. Assist in the establishment of a Multi-District Teacher — Parent — Administrator Committee for career education and serve as a member of that team to meet a minimum of three (3) times 100
8. Coordinate and schedule a minimum of five (5) career presentations and five (5) cultural presentations to be given by a representative from the world of work 150
9. Coordinate and schedule field trips for on-site visits for career and cultural enrichment; minimum of five (5) career; minimum of five (5) cultural 100
10. Recordkeeping and documentation for all meetings, presentations, field trips, and material dissemination 50

THE TOTAL AMOUNT ALLOWED FOR ANY COORDINATOR SHOULD BE $1,000.00

APPENDIX D

BUDGET REPORT

APPENDIX D

BUDGET REPORT

CBEP

CHEROKEE BILINGUAL EDUCATION PROGRAM

P.O. BOX 769
HIGHWAY 62 SOUTH
TAHLEQUAH, OKLAHOMA 74464

OFFICE PHONE
456-6177

August 21, 1978

Mr. Jacob J. Maimone
ROB 3, Room 5927
Grants and Procurement Division
USOE/7th & D, S.W.
Washington, DC 20202

Dear Mr. Maimone:

We are hereby submitting this letter of request for a no-cost extension on our Vocational Research Project. Our grant number is G007702065, and the project number is 498AH70173. We are requesting a ninety (90) day extension to complete our report. We are in the process of compiling the research data and writing the rough draft of the report. It will take approximately eighty (80) days to complete the report and have it printed. Our request does not require additional funds. However, it will become necessary to expend funds beyond the August 31, 1978, deadline. We are submitting a budget revision along with our letter of request for extension. The budget revision is attached.

Should you have any questions on this matter please call us. We humbly request your approval on our request for a no-cost time extension on our project.

Sincerely,

Agnes Cowen

AC:pd

Attachment

BUDGET REVISION

A. PERSONNEL:	
1. Project Coordinator	-0-
2. Project Secretary (3months)	$1,800.00
B. FRINGE BENEFITS:	
10% of $1,800.00	180.00
E. SUPPLIES:	
1. Evaluation (pre-testing)	-0-
2. Evaluation (post-testing)	-0-
3. Career Handbooks	-0-
4. Counselor's Handbooks	-0-
5. Planning Your Career	-0-
6. Office Supplies	454.00
H. OTHER:	
1. Building Facilitators	-0-
2. Contractual Services	-0-
3. Consultant Services	1,300.00
4. Local Travel	300.00
5. Communication (telephone & postage)	300.00
6. Report writing, Printing, & Dissemination	1,500.00
	$5,834.00