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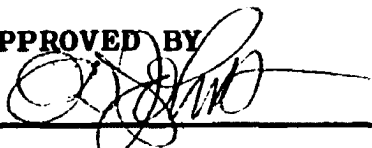
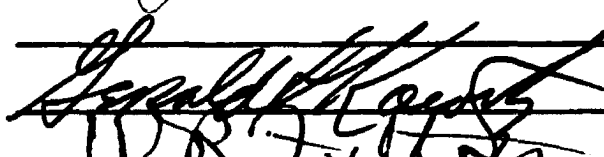
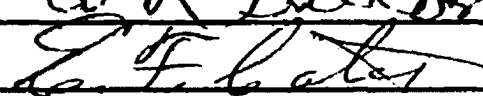
A DISSERTATION  
SUBMITTED TO THE GRADUATE FACULTY  
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degree of  
DOCTOR OF EDUCATION

BY  
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Norman, Oklahoma

1971

**FACTORS WHICH RELATE TO TEACHER TURNOVER  
IN BUREAU OF INDIAN AFFAIRS SCHOOLS**

**APPROVED BY**

**DISSERTATION COMMITTEE**

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FACTORS WHICH RELATE TO TEACHER TURNOVER  
IN BUREAU OF INDIAN AFFAIRS SCHOOLS

CHAPTER I

INTRODUCTION

Teacher recruitment in the Bureau of Indian Affairs has grown from an individual school responsibility into a centralized effort conducted by a teacher recruiting unit stationed in Albuquerque, New Mexico.

The Bureau of Indian Affairs annually recruits from five hundred to seven hundred teachers in all academic, vocational and guidance fields. These teachers are recruited from almost every state in the Union. Recruitment is the principal procedure for securing needed personnel, although many teachers are still employed from local sources by each school or area. Teachers are presently employed by the Bureau at three different grades, designated as GS-5, GS-7 and GS-9.

Possession of the basic requirements meets in full the qualifications for GS-5. Experience and education beyond the basic requirements may qualify a new teacher at the GS-7 entrance level. The quality and level of this experience may qualify a teacher to begin at the GS-9 grade.

Recruitment of teachers, carried out in the past

in a haphazard fashion, is becoming more centralized and structured in the Bureau of Indian Affairs. There is need to further refine recruitment efforts and to identify, train and retain those new teachers who show potential for growth and service to Indian children.

The Teacher Recruitment Office of the BIA and the Civil Service Inter-Agency Board divide between them the responsibility for recruiting, rating and assigning teachers. The Board deals with high school teachers only, while the Recruitment Office is concerned with elementary teachers and all guidance and dormitory personnel. Bureau high school teachers must have teaching skills in more than one subject and the complexity of filing and processing this complicated data explains the Board's more narrowly defined activity.

The present joint operation of the BIA Teacher Recruitment Office and the Civil Service Inter-Agency Board seems, at first, to be an improvement over earlier methods. However, several problems limit the success of these agencies in providing enough of the very best teachers for the Bureau schools.

An ABT Associates Incorporated report states that:

Though the consolidation of recruiting in these offices greatly reduces the difficulty of application for a potential recruit (who under earlier recruiting by area, had to apply to each of the areas from which he wanted to choose), some doubts were expressed to the analysts about the wisdom of removing all recruiting duties from the area, which knows the needs and its own schools more intimately. Presently, one problem area seems to be the communication of staff needs from the area to the

Recruiting Office. The information flow is circuitous because the Recruiting Office is not responsible to the Education Division, but to the Administrative Division. This constitutes the major problem in the present recruiting structure. Education Division personnel complain that the Recruiting Office is unresponsive to Education's needs and the Recruiting Office does as it sees fit, without any direct contact with the BIA schools. Initial contact between the system and most potential teachers is handled by six field recruiters, all of whom are former BIA teachers. They are each responsible for two geographically separated areas and travel a circuit of college placement offices. Some difficulty has been experienced in the past by recruiters trying to arrange their first visit to a new college. This is attributable to the Bureau's hazy, or even negative, public image which results from a haphazard public information program. Compared to the publicity given efforts against poverty and discrimination, the Bureau's relative silence implies to many teachers (as well as to the general public and its legislators) that the problems are minor or that major problems are being suppressed. Either impression is unlikely to attract the socially-conscious teachers needed.<sup>1</sup>

The required qualities in a recruit which will make him a successful teacher within the Bureau are quite vague, and tend to be expressed only in general terms. The ABT report states that recruiters are said to look for the following:

Good training and background, ability to identify the needs of others, inventiveness in problem solving, willingness to work hard, and warmth. Of these, the last is considered the most important.

Much of their dependence on imponderable qualities is directly related to the unfavorable pay arrangements which weaken the Bureau's bidding

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<sup>1</sup>ABT Associates Incorporated, "System Analysis, Program Development and Cost Effectiveness Modeling of Indian Education," Vol.II, Education Systems Analysis and Programs Development, (Cambridge, Mass.), Undated Report, p. 70.

for the very best talent. The recruiters are forced to seek out that portion of the teacher labor supply which is motivated by selflessness.<sup>2</sup>

Unlike most teachers in public systems, Bureau teachers are free to leave at any time with only two weeks' notice, in accordance with standard Federal employment practice and no binding contract may be entered into between the Bureau and its employees. This may be attractive from the viewpoint of the teacher, but it creates sudden last minute demands to replace new teachers who quit shortly after the beginning of the fall term, or who stay only from September to September in order to get reimbursed for their moving expenses, as is government policy.<sup>3</sup>

According to the ABT report, much of the difficulty experienced by the Bureau in obtaining the kind of teachers it seeks is its inadequate understanding of just what attributes make a successful teacher in a cross-cultural situation. Presently, the only feedback of teacher performance to the recruiting offices comes from visits by recruiters to recently-recruited teachers in the first year of service. This does not provide sufficient data from which to profile the characteristics of successful teachers.<sup>4</sup>

Charles N. Zeller, Assistant Commissioner (Education), stated in a position paper to the United States

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<sup>2</sup>Ibid., p. 72.

<sup>3</sup>Ibid., p. 73.

<sup>4</sup>Ibid., p. 74.

Commission that, "There is more to selecting an educator than examining credentials when determining his qualifications for a teaching position."<sup>5</sup>

There is a need to examine the methods of selecting teachers, and a further need to identify factors which are related to the high rate of turnovers among first year teachers in Bureau of Indian Affairs schools. Most Bureau of Indian Affairs officials feel that the present rate of turnover is unacceptable, representing a huge financial loss in recruitment, selection, and training efforts and an even greater loss in potential services to Indian children.

The purpose of this investigation was to determine the relationships between selected personal factors of first year teachers in the Bureau of Indian Affairs and employment conditions as perceived by these teachers; and the rate of turnover among these first year teachers.

Knowledge of what first year teachers think about conditions of employment in the Bureau schools can be of value in shaping the selection, orientation and placement policies of the Division of Education.

### The Problem

The problem of this study was two-fold and was stated interrogatively as follows:

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<sup>5</sup>Notes from Mr. Zeller's presentation to the Civil Service Commission, Position Paper, Bureau of Indian Affairs Teachers Comparability, Department of Interior Files, p. 8, (Xeroxed), 1968.

1. Are there statistically significant differences between teachers who terminate their services before completing or at the end of one year of service, and those who remain with the Bureau of Indian Affairs for more than one year with respect to: age, sex, marital status, ethnic origin, school age children in the family, years of teaching experience, General Service entry grade, assignment in major field, size of community in which they were reared, geographical region they call home, method of referral to the Bureau, size and type of school to which assigned, isolation of school, and employment status of spouse.

2. Are there statistically significant differences between teachers who terminate their services before completing or at the end of one year of service, and those who remain with the Bureau of Indian Affairs for more than one year with respect to pre-employment information received; orientation; employment conditions; supervision; and school assignment and other conditions as perceived by first year teachers.

The following null hypotheses were tested:

$HO_1$  There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to age.

$HO_2$  There is no difference, other than chance, between teachers who remained in the Bureau and those who

terminated during or at the close of the first year with respect to sex.

HO<sub>3</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to marital status.

HO<sub>4</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to ethnic origin.

HO<sub>5</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to the number of school age children in their families.

HO<sub>6</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to total years of teaching experience.

HO<sub>7</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to General Schedule entry grade.

HO<sub>8</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to assignment in major field.

HO<sub>9</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to size of community in which they were reared.

HO<sub>10</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to geographical region from which they came.

HO<sub>11</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to method of referral to the Bureau.

HO<sub>12</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to size of school to which assigned.

HO<sub>13</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to type of school to which assigned.

HO<sub>14</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to isolation of school to which assigned.

HO<sub>15</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who



terminated during or at the close of the first year with respect to employment of spouse.

HO<sub>16</sub> There is no difference, other than chance, between Bureau teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to their perceptions of the adequacy and accuracy of pre-employment information given them.

HO<sub>17</sub> There is no difference, other than chance, between Bureau teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to their perceptions of the orientation program.

HO<sub>18</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to their perceptions of employment conditions.

HO<sub>19</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to their perceptions of the supervisory program.

HO<sub>20</sub> There is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to their perceptions of school assignment and living conditions.

#### Delimitation of the Problem

This study was limited to Bureau teachers or counselors

employed during the 1969-70 school year, between the dates of July 1, 1969, to June 30, 1970.

### Definition of Terms

#### Bureau of Indian Affairs

The Government Bureau in the Department of the Interior charged with the trust of restricted status of certain Indian lands and funds.

#### Division of Education

The branch within the Bureau of Indian Affairs charged with educational activities.

#### First Year Teacher

A teacher or teacher-counselor who has been employed for the first time by the Bureau of Indian Affairs.

#### Isolation

A school located 25 or more miles from a city offering medical, religious, shopping and recreational facilities.

#### General Schedule Grade

GS-5: The basic Civil Service entry grade in the Branch of Education, Bureau of Indian Affairs for teachers. A Bachelor's Degree (any major) from an accredited college or university and special qualifications for a particular level such as elementary, secondary, or guidance satisfy the requirements for this basic grade.

GS-7: In addition to the basic requirements, one may be employed at the GS-7 level with one year of teaching experience or experience in another educational field. A

college graduate may also be employed at the GS-7 level if he meets certain prescribed academic achievement levels which can be considered superior.

GS-9: A teacher who meets the superior academic achievement level for GS-7 and has had at least one year of professional experience at a level equivalent to Grade GS-7 may be appointed at the GS-9 grade.

#### Boarding School

A school providing Indian students with a dormitory for living purposes, and a system for their academic or vocational education.

#### Day School

A school providing only academic or vocational educational activities. Students reside at home and commute to the institution.

#### Boarding/Day

A school offering boarding facilities for those who need it and academic and vocational educational activities for both dormitory residents and those who reside at home.

### The Data

#### Primary Data

The primary data for this study were gathered through the use of a questionnaire (Appendix II). This was a survey of first year teachers in the Bureau of Indian Affairs. All teachers employed for the first time in the 1969-70 school year were included. All teachers and

counselors included in the sample were asked to provide the information requested on the data form and to respond to the questionnaire.

Data for testing hypotheses one through 14 were secured from the personal data portion of the survey instrument. Data to test hypotheses 16 through 20 were secured from responses to the questionnaire portion of the survey instrument designed to reveal teachers perceptions concerning factors which might have a bearing on teacher satisfaction in the positions to which they were assigned.

### Secondary Data

Secondary data were secured from a review of the literature in the area of teacher turnover, teacher unrest, teacher selection, supervision, and in-service education.

The Bureau of Indian Affairs, Division of Education, was asked to assist in securing the primary data by allowing the investigator to use personnel to assist in preparing and mailing the material, and by furnishing names and addresses of school personnel. Information about the recruitment program, its authorization, the formulation of guidelines, and its implementation came from the Central Office, Washington, D. C. Additional information was secured from recruiting personnel at Albuquerque, New Mexico.

### Type of Research

The method of research for this study was descriptive and casual-comparative. Sax says:

The purpose of descriptive research is to show conditions as they exist without being influenced by the investigator. Descriptive research encompasses a number of different techniques, including correlation analysis, case studies, surveys, and interviews, as well as direct observations.<sup>6</sup>

Van Dalen classifies descriptive studies into three arbitrarily selected categories: (1) survey studies; (2) interrelationship studies; and (3) developmental studies.<sup>7</sup> He states:

Surveys may be broad or narrow in scope. They may encompass several countries or may be confined to one nation, region, state, city school system, or some other unit. Survey data may be gathered from every member of a population or from a carefully selected sample. Data may be collected concerning a large number of related factors or a few selected items. The scope and depth of the study depend primarily upon the nature of the problem.<sup>8</sup>

Van Dalen further identifies casual-comparative studies as one form of interrelationship studies. Casual-comparative studies try to discover not only what a phenomenon is like, but if possible, how and why it occurs. He states:

When researchers cannot manipulate the independent variable and establish the controls that are required in 'true experiments,' they may conduct a casual-comparative study.<sup>9</sup>

He further notes the limitations of this type of

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<sup>6</sup> Gilbert Sax, Empirical Foundations of Educational Research, (Englewood Cliffs: Prentice Hall, Inc.), 1968, p. 36.

<sup>7</sup> Deobold B. Van Dalen, Understanding Education Research, (New York, McGraw-Hill Book Co.), 1966, chap. 10, p. 206.

<sup>8</sup> Ibid., p. 207.

<sup>9</sup> Ibid., p. 221.

study:

Casual-comparative studies have many limitations, and they often do not produce the precise, reliable knowledge that can be gained through rigorous experimental studies. But they do provide a means of tackling problems that cannot be probed in laboratory situations, and they yield valuable clues concerning the nature of phenomena.<sup>10</sup>

### Research Instrument

The research instrument (Appendix II) consisted of a questionnaire divided into two parts. Part I was designed to provide personal data about the respondent. Part II consisted of a number of questions divided into five sub-groups designed to reveal teachers perceptions of significant aspects of their employment with the Bureau, and to elicit responses which could be given a summated rating. Questions were answered by one of six responses: Strongly agree; Agree; Undecided; Strongly disagree; and Does not apply.

Questions one through seven were designed to yield data for testing Hypothesis 16, that there is no significant difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to their perceptions of the adequacy and accuracy of pre-employment information given them.

Questions eight through 16 were designed to yield data for testing Hypothesis 17, that there is no difference,

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<sup>10</sup>Ibid., p. 227.

other than chance, between Bureau teachers who remained and those who terminated during or at the close of the first year with respect to their perceptions of the orientation program.

Questions 17 through 32 were designed to yield data for testing Hypothesis 18, that there is no difference, other than chance, between teachers who remained and those who terminated during or at the close of the first year with respect to their perceptions of employment conditions.

Questions 33 through 44 were designed to yield data for testing Hypothesis 19, that there is no difference, other than chance, between teachers who remained and those who terminated during or at the close of the first year with respect to their perceptions of the supervisory program.

Questions 45 through 53 were designed to yield data for testing Hypothesis 20, that there is no difference, other than chance, between teachers who remained and those who terminated during or at the close of the first year with respect to their perceptions of school assignments and living conditions.

The research instrument was developed in cooperation with the investigator's doctoral advisor and education specialists in the Bureau. Validation for content and construct validity was done by submitting it to over 20 first year Bureau teachers. Teachers were asked to complete the questionnaire portion of the instrument, and give an

appraisal of its structure and clarity. Their comments and suggestions were considered in the preparation of the final instrument. Thus, there were three steps for content validation--the investigator, a panel of experts, and a sample of the people to be surveyed. Construct validity was examined by the same three steps.

#### Method of Procedure

The Bureau of Indian Affairs, Division of Education, was asked to cooperate in this research. Names and school addresses of all professional teachers, recruited for the school year 1969-70 were obtained from the recruiting office and from the personnel offices of the eleven areas. Usable returns were received from 356 of the 518 teachers identified as having been employed by the Bureau for the first time between the dates of July 1, 1969, and June 30, 1970.

After June 30, 1970, each area personnel office was asked to furnish a list of those teachers who had terminated their services with the Bureau during the year. Using this list, the questionnaires received were divided into two groups, one composed of those terminating before or at the end of the first year, and one composed of those remaining beyond the first year.

Information from the personal data forms (Part I of the survey instrument) was tabulated on frequency tables and the totals placed in the proper cell of a contingency table for each of the first 15 hypotheses. A crossbreak



analysis was made for each hypothesis. Kerlinger states that a "crossbreak" is most appropriately used in frequency and percentage analysis.<sup>11</sup>

Comparisons were made between those teachers who terminated during or at the close of the first year and those who remained for a second year. The chi square test for the significance of difference was used. The chi square formula is:  $X^2 = \sum \frac{(O-E)^2}{E}$ . The .01 significance level was used to reject or not to reject each hypothesis. The .01 significance level reduces the risk of making a type-one error, that the hypothesis is true but is mistakenly rejected.

Part II of the survey instrument consisting of a questionnaire containing five sets of questions was designed to provide opportunity for respondents to make one of six responses to each of 53 statements. Points were scored as follows: Strongly agree, five points; Agree, four points; Undecided, three points; Disagree, two points; and Strongly disagree, one point.

A summated rating scale (also called Likert-Type Scale) was used to measure the intensity of responses. The purpose of this summated rating was to place an individual somewhere on an agreement continuum on the set of questions.

Scores of each individual respondent were then placed on a tabulation sheet for each question. From the

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<sup>11</sup>F. Kerlinger, Foundations of Behavioral Research, New York: Holt, Rinehart and Winston, Inc., 1965, chap. 35, p. 625.

tabulation sheet scores were placed on a frequency distribution table and the mean was computed for both those terminating and those remaining. Scores above the mean were considered as positive and those below the mean as negative. The number of positive and negative scores in each turnover category were then used in a contingency table to compute the chi square. A comparison of factors related to teachers terminating and those teachers remaining for one year was made by using a crossbreak analysis of each item on the data sheet and on each set of questions in the questionnaire. The chi square test for significance was used to accept or reject the hypotheses that the variables were independent of the turnover categories of the respondents. The .01 level of significance was used.

### Organization of the Report

Chapter I is concerned with the statement of the problem, delimitations of the study, a definition of the terms; description of the data, the type of research, the research instrument, the method of procedure and the organization of the report.

Chapter II consists of a review of the literature concerning the teacher recruitment process, the teacher selection process, the orientation of new teachers, the in-service education of new teachers, the supervisors responsibility for in-service education, teacher turnover and teacher morale.

Chapter III contains the presentation and analysis of the data.

Chapter IV includes the summary, findings, conclusions and recommendations.

## CHAPTER II

### REVIEW OF THE LITERATURE

Turnover of teachers is recognized by most educational writers as a very definite problem in providing quality education for the Nation's children. In an effort to identify those factors contributing most significantly to turnover, a review of current educational literature was made. Special emphasis was given to literature published in the last ten years.

The general morale of teachers may be a major contributing factor in teacher turnover. If morale is high, turnover should be minimal. If morale is low, the result will probably be excessive turnover. Some of the factors which have been identified as having a bearing on morale are: recruitment, selection, orientation, living and working conditions, and in-service education. These were the general areas on which the questions in the survey instrument were based and represent the topics which are discussed in the review of literature.

According to Knezevich:

Morale is difficult to define and even more difficult to measure. It is a state of being more easily felt intuitively than described and verified. Morale is not necessarily an end in its self. It is a means of promoting a smoothly functioning and productive institution. It is possible to

have high morale and little accomplishment.<sup>1</sup>

Knezevich states further, "The development of good morale starts the day the individual is employed, and is improved by the general atmosphere in the school system."<sup>2</sup>

### The Teacher Recruitment Process

Recruitment is the first active function of a personnel department after the decision as to what positions are needed and what qualifications are desired in those selected to fill these positions.

Knezevich says:

The success of recruitment is related to attitudes about the teaching profession formulated prior to entry into college, that is during high school days. Many teachers contribute little to the formation of positive attitudes toward the educational profession among their students who might constitute a recruitment pool of potential teachers.<sup>3</sup>

School administrators must be concerned with future teachers and their competence to teach the young. According to Nigro, government, like industry, must recruit, and not just accept applications. It goes without saying that there will always be applicants, but it is the quality of the candidate with which we are concerned--good ones are hard to

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<sup>1</sup>Stephen J. Knezevich, Administration of Public Education, (New York: Harper and Row, Publishers, 1969), p. 348.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., p. 333.

find.<sup>4</sup>

Johns, Morphet and Reller say that, "One of the most important, if not the most important single area of administration, is that of personnel."<sup>5</sup>

They also state:

Personnel administration is, therefore, not a means for manipulating employees and getting the largest returns out of them. It is, rather a series of procedures through which the enterprise may establish common goals, and may work effectively toward their attainment. Recruitment, orientation, transfers and morale thus become responsibilities not of the administration alone, but of all members of the staff including the administrator.<sup>6</sup>

According to Davis and Nickerson, "If we can accept the statement, as is the teacher, so is the school, recruitment of the right teachers becomes of paramount importance." They define recruitment as:

The process whereby qualified personnel are made interested enough in a position to apply for it. Recruitment and selection of teachers and administrators can be accomplished effectively only after a thorough assessment has been made to determine what specific teacher capabilities are required, what competencies are available in the present staff and what competencies must be secured.<sup>7</sup>

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<sup>4</sup>Felix A. Nigro, Public Personnel Administration, (New York: Henry Holt and Company, 1959), p. 161.

<sup>5</sup>Roe L. Johns, Edgar L. Morphet, and Theodore L. Reller, Educational Organizations and Administration, (Englewood Cliffs: Prentice Hall, Inc., 1967), p. 409.

<sup>6</sup>Ibid., p. 411.

<sup>7</sup>Donald E. Davis and Neal C. Nickerson, Jr., Critical Issues in School Personnel Administration, (Chicago: Rand McNally & Company, 1968), p. 18.

Moore, in stressing the importance of recruitment programs, stated that it is one of the most important public relations activities in which the school system participates. It has public relations implications both for the school system and the community since the personnel employed become residents of the community at large.<sup>8</sup>

Davis and Nickerson cite a study done by the Institute of Administrative Research at Teachers College, Columbia University, which asked urban and rural teachers to mention the four main considerations that would influence them to change their positions. The study indicated that improvement in salary status is the biggest incentive to change positions, but it is not the only one. Cultural and social factors within a community are also strong attractions when it comes to choosing a teaching position. The fact that rural communities have less to offer in these important respects--financial incentives, cultural life and social satisfaction--is attested to by a large number of secondary teachers who indicated a preference for city and suburban areas over rural areas. They interpreted this to mean that rural areas may be forced to compensate with higher salaries to overcome these deterrents when securing highly qualified personnel.<sup>9</sup>

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<sup>8</sup>Harold E. Moore, The Administration of Public School Personnel, (New York: The Center for Applied Research in Education, 1966), p. 40.

<sup>9</sup>Davis and Nickerson, loc. cit., p. 24.

Gibson and Hunt state that, "The fact that much of the turnover in the teaching profession takes place in the first five years of experience raises very sharply the question of job satisfactions and career commitments."<sup>10</sup>

### The Teacher Selection Process

Teacher selection is the cornerstone of the staff personnel program. Among educators there seems to be a general agreement that, because of the close relationship between the quality of the instructional staff and the degree of success of the education program, the teacher selection program is the most important single responsibility of the school administrator.<sup>11</sup>

Chandler and Petty say that a realistic and effective selection program recognizes three things:

(1) high professional standards attract high-caliber individuals, (2) the intensity of the search for candidates is related to the prevailing relationship between supply and demand, and (3) desirable working conditions (including adequate teacher salaries) and wholesome community attitudes toward education attract well qualified teachers.<sup>12</sup>

Etters investigated the staffing characteristics of four hundred and thirty nine school districts in Iowa,

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<sup>10</sup>R. Oliver Gibson and Herold G. Hunt, The School Personnel Administrator, (Boston: Houghton Mifflin Company, 1965), p. 190.

<sup>11</sup>B. J. Chandler and Paul V. Petty, Personnel Management in School Administration, (Yonkers-on-Hudson: World Book Company, 1955), p. 127.

<sup>12</sup>Ibid., p. 126.



using ten teacher dependent variables, and twenty-four local district characteristics that served as independent variables. Among the conclusions were (1) that salary inducements were extremely important in attracting teachers, and (2) that urban districts were more successful than districts in rural areas in competing for the more highly trained candidates.<sup>13</sup>

The sources of teacher supply are similar to those of other types of employees. Boynton listed six sources from which new employees come:

(1) from within the organization, (2) through the front door, (3) college recruiting, (4) commercial and public employment agencies, (5) commercial advertising, and (6) letter of application.<sup>14</sup>

He offers this advice when recruiting in the colleges and universities:

Do not exaggerate either the requirements of the position or the qualifications desired. Overpainting the picture can easily result in dissatisfaction of the individual selected, followed by needless turnover which will tend to discredit your company at that particular college.<sup>15</sup>

Hunter says that, "Although some turnover is desirable and expected, a high rate of turnover becomes expensive to a school system. It is not to be expected that all people

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<sup>13</sup>Earl Martin Etters, "Characteristics of Newly Hired Teachers Related to Selected Variables of School Districts in Iowa," Doctoral Dissertation, (Iowa City: State University of Iowa, 1965), Dissertation Abstracts, Vol. XXVI, 2559, No. 5, p. 313.

<sup>14</sup>Paul W. Boynton, Selecting the New Employee, Techniques of Employment Procedures, (New York: Harper & Brothers, Inc. 1949), p. 33.

<sup>15</sup>Ibid., p. 52.

will be satisfied with their first selection of a field to work in."<sup>16</sup>

He made the following further observation on teacher turnover:

Obviously the process of choosing an occupation, which begins at least in college with the decision about a course of study and continues into the selecting of a first job, continues even in the first year of teaching. The relatively high turnover it entails among first year teachers represents a high cost to employing school systems. Yet the extent to which school administrators can take action to reduce this cost is problematic, many changes in career plans are based on major changes in the lives of young people--changes beyond the power of school administrators to influence. High turnover among beginning teachers is one of the facts of life with which school administrators must live.<sup>17</sup>

The Bureau of Indian Affairs has a stated employment policy of Indian preference in all entry grades.<sup>18</sup> This policy was originally adopted to give jobs to Indians, but is now being used to employ all or a majority of Indian teachers so that the culture may be imparted to young people.

The Bureau follows a policy in its recruiting of filling positions without regard to race, religion, color, sex, national origin or creed, except that applicants of one-fourth or more Indian blood will receive preference. If

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<sup>16</sup>J. Scott Hunter, "Turnover Among Beginning Teachers--A Follow-Up," School Life, Vol. XLIV, No. 6 (April 1962), pp. 22-24.

<sup>17</sup>Ibid., pp. 22-24.

<sup>18</sup>U.S., Federal Personnel Manual, Personnel, 44 IAM Addition to FPM, Chap. 713, "Equal Opportunity," 44 IAM 713, 2.2 Subchapter 2, .2 Policy, 1969.

enough Indian applicants become available to completely staff the Bureau schools, this could result in a racially segregated institution with teachers coming from only one social background. However, this danger does not seem to be imminent in the light of the proportion of Indian teachers presently employed by the Bureau.

Miller suggests that a faculty should represent different backgrounds:

Although forbidden in some states by the so-called Fair Employment Practice Acts, it is the opinion of the author that race, religion, social class, cultural background and political philosophy should all be taken into account. This nation has a heterogeneous population that migrates freely from state to state and from region to region. The child will come to know and understand fully that Catholics, Jews, Protestants and people of no specific religious affiliation have much in common as people when he is associated with them. If he is to learn that intelligence, love of teaching and affection for children are found under skins of any color, then he must have experience with people of many colors.

That faculty is probably best which is intentionally designed to include teachers from as many different backgrounds as possible, provided it is also selected on a basis of ability to work well together and is compatible to the community setting in which it must work.<sup>19</sup>

Blakeslee, in his doctoral study, corroborates Miller's opinion that teachers should be selected from many different backgrounds. The groups he studied agreed that a candidate's attitude and interest toward pupils was most

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<sup>19</sup>Van Miller, The Public Administration of American School Systems, (New York: The MacMillan Company, 1965), p. 293.

important. Other important criteria were the candidate's knowledge of and interest in the subject matter to be taught, and the ability to establish and maintain classroom control. The least important criteria he found were political party, religion, ethnic background, sex, marital status, age and height. Selected student teachers, experienced teachers, and administrators indicated that the candidate's professional preparation was of greater importance. Although agreeing on professional preparation there was some disagreement on other qualities of the beginning teacher.<sup>20</sup>

Blakeslee's study found that "beginning teachers" was the sole group to indicate a candidate's self-confidence as highly important. Beginning teachers also thought that the candidate's general intelligence was of less importance than did the other groups. Both beginning and experienced teachers attached less significance than did other groups to a candidate's interest in the subject matter field to be taught.<sup>21</sup>

Lang says that before recruiting can begin, the recruiter must be able to forecast teacher needs. Determining teacher needs involves not only the number of teachers needed, but also the quality. He feels there is no magic formula for developing and putting into operation a program for

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<sup>20</sup>Charles Joseph Blakeslee, "Attitudes (of Selected Personnel) and Criteria in Teacher Recruitment and Selection," Dissertation Abstracts, Vol. XXVIII, No. 3, (September, 1967).

<sup>21</sup>Ibid.

teacher recruitment and selection. The person in charge of teacher recruitment and selection must plan a program within the circumstances existing in his district, giving major consideration to whether the district wishes to employ the best teacher available, good teachers, or merely teachers.<sup>22</sup>

With respect to teacher mobility, Lang offers the following comment:

Teacher mobility in relation to origin is another matter a recruiter may be able to use in making his predictions. One California district found that the most mobile group of teachers, that is teachers who remained the least number of years, are those from the East coast. The second most mobile group are those that come from other California districts. The most stable group came from within the community and the second most stable from the Midwest.<sup>23</sup>

Hawk indicates that a recruiting effort is inescapably a subsystem of the total business system which it serves. There are at least three generalized plans to be developed, preferably sequentially to guide the recruiting and placement activities. They are: (1) the manpower plan, (2) the personnel development plan, (3) the recruiting plan.<sup>24</sup>

Diekroger studied research on teachers selection and developed academic and personal criteria that seem to be most valuable in selecting teachers were: (1) number of

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<sup>22</sup>Carroll L. Lang, School Executives Guide, Part II, (Englewood Cliffs: Prentice Hall, Inc., 1964), p. 90.

<sup>23</sup>Ibid., p. 91.

<sup>24</sup>Roger H. Hawk, "The Recruitment Function," American Management Association, (Princeton: Princeton Press, 1967), p. 144.

subject matter courses taken, (2) grades in subject matter courses, (3) communication skills such as verbal ability, oral vocabulary, and literary background, and (4) number of graduate credits or preferably graduate degrees. Academic criteria which did not appear to be valuable in selecting teachers were: (1) number of professional education courses, (2) grades in professional education courses, (3) intelligence scores, and (4) teaching experience. Personal criteria which appeared to be most valuable in selecting teachers were: (1) a broad and diverse geographic background or residency, (2) personality of the teacher--this was generally found to be the most important factor in teaching success, but also the most difficult to define, measure and evaluate. Personal criteria which did not appear to be valuable in selecting teachers were: (1) age, (2) cultural background, (3) health, (4) marital status, and (5) sex.<sup>25</sup>

The recruitment of teachers for rural and isolated areas may need incentives other than salary, social or cultural advantages. Miller says that all school districts face periodic needs to hire new professional employees. He expresses concern about the effect on teacher recruitment of undue emphasis on material benefits and security. He suggested that the psychic rewards of socially significant service could be the basis for drawing superior recruits to

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<sup>25</sup>Wayne Arthur Diekroger, "Teacher Selection--A Synthesis and Integration of Research Findings," (Ann Arbor: Dissertation Abstracts International, December 1969), Vol. XXX, No. 6, pp. 2283A-2284A.

teaching. He cautions, however, that the commitment of teachers to perform a socially significant service can be blunted by authoritarian and paternalistic attitudes of school administrators.<sup>26</sup>

Supporting Miller's statement, Fallberg says that other areas of endeavor have increased in popularity among graduating students. Education and government have become more attractive in terms of financial rewards as well as appealing to the students desire to contribute to the elimination of society's ills.<sup>27</sup>

Teachers entering the Bureau of Indian Affairs are often faced with an entirely different culture than the one in which they grew up. This can be a shock to young teachers and may lead to rapid first year turnover. Lang is concerned about the obvious cultural gap that is evident between some teachers and their students:

While the term "generation gap" is comparatively well understood, there is probably a "cultural gap" between the middle class teacher and deprived students that is less well understood. It is probable that this cultural gap has soured otherwise competent teachers on teaching, and it is most obvious that the value system of the middle class teacher is totally or at least partially hostile to other cultural values.<sup>28</sup>

Schwab asks, "How does one determine in advance what

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<sup>26</sup>Van Miller, op. cit., p. 296.

<sup>27</sup>Howard Fallberg, Personnel Management, (Dobbs Ferry: Oceana Publications, Inc., 1968), p. 14.

<sup>28</sup>Carroll L. Lang, Teacher Recruitment--Problems, Promises and Proven Methods, (Englewood Cliffs: Prentice Hall, Inc., 1968), p. 16.

a teacher candidate's cultural background is and how different it may be from those he will be teaching?" Perhaps the interview is the one single best method of determining a candidate's cultural background. To be so, however, the interview must be carefully constructed and the interviewer must be quite astute in interview techniques. Even with the best possible interview, the results may be suspect.<sup>29</sup>

Schwab says that, "A wide variety of research conducted over a period of some fifty years simply does not support a number of assertions made by the supporters of the employment interview." He quotes a study in which Wagner reviewed over one hundred articles on interviewing and concluded that there was little evidence supporting the validity of interviews.<sup>30</sup>

Hackamack and Jannone say that, before a school system begins recruiting, it might be advantageous to know what the prospective recruit feels is important to him in selecting an employer. They list several items that represent what the college graduate of today feels are important in selecting an employer:

- (1) keep recruiting practices ethical, (2) offer new recruits responsible jobs in the firm, (3) treat each recruit as an individual, (4) be sure that recruiters know a good deal about their firm's background, (5) don't over emphasize the importance of college grades, and (6) give an over-all good

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<sup>29</sup>Donald P. Schwab, "Why Interview," Personnel Journal, Vol. XVIII, No. 2, (February, 1969), pp. 126-129.

<sup>30</sup>Ibid.



impression of the firm to all interviewees.<sup>31</sup>

According to Fallberg, after the recruitment and selection phases are over, there are other important factors related to turnover. He states:

The first year of an individual's employment with a company can be the most decisive. Patterns of behavior, performance, and attitudes are often molded during this period of time. Foundations are laid for both job satisfaction and level of motivation. The organization must strive to orient the individual and start him on his career in such a manner that he can see himself growing, developing and utilizing his skills to maximum advantage for himself and the company for which he works.<sup>32</sup>

#### The Orientation of New Teachers

Chancey writes, "Many professional surveys show that the bulk of employees who leave a firm do so within the first year. It stands to reason then, if a firm can improve its initial contacts with its employees it increases its likelihood of retaining these employees."<sup>33</sup>

Boynton lists the following as the objectives of an induction program:

- (1) to establish the new employee's relationship to the company, (2) to help him adjust himself

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<sup>31</sup>Lawrence C. Hackamack and Charles R. Jannone, "Selecting, Recruiting, Retaining Today's College Graduate," Personnel Journal, Vol. XVIII, No. 12, (December, 1969), p. 589.

<sup>32</sup>Fallberg, op. cit., p. 49.

<sup>33</sup>Lee Chancey, "An Orientation Systems for New Employees," Training and Development Journal, The American Society for Training and Development, Vol. XXII, No. 5, (May, 1968), pp. 52-56.

to his new environment, (3) to inform him of company policies and regulations, benefits, etc., (4) to follow through his trial period to determine whether he is making a satisfactory adjustment, (5) to determine what specific training he requires to fit him for his present job or to prepare him for a better job.<sup>34</sup>

While these induction goals are for industrial workers, they are similar to the ones Chandler and Petty list for personnel management in school administration. They say a desirable induction plan is one that gives maximum assistance to the new teacher in achieving his optimum teaching efficiency. The satisfactory adjustment of new faculty members is usually dependent upon a program characterized by the following eight features:

(1) induction practices are well organized and effectively administered, (2) induction in a phase of local selection and assignment of teachers, and also of the in-service education program, (3) a desirable induction program recognizes the problems and needs of its new members, (4) definite and specific induction objectives or goals are stated, (5) the plan is comprehensive and employee practice is specifically designed to achieve stated goals, (6) the induction program helps a school system to realize full value from new teachers, (7) induction plans are adapted to the particular school system, and (8) the induction program is continually evaluated and improved.<sup>35</sup>

Johns concluded from his study of the pre-school conference that four major purposes of the program were:

(1) to improve the instructional program, (2) to achieve a smooth and efficient opening of the school year, (3) to improve the orientation procedure for teachers new to the system, (4) to initiate, stimulate and improve the cooperative

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<sup>34</sup>Boynton, loc. cit., p. 52.

<sup>35</sup>Chandler, loc. cit., p. 169.

study of school problems.

He found that the most important outcomes of the pre-school conference were:

(1) better orientation of new teachers, (2) smooth opening of the school year, (3) improved faculty morale, (4) improved instruction, and (5) professional growth of the faculty.<sup>36</sup>

Most educational writers recognize the need for an orientation program. Ferguson feels that the transition from student to full time teaching is not an easy one. He says that in no other occupation does the individual step directly into full responsibility. To him, this indicates that in school systems which hire beginning teachers there should be a special orientation program. Laymen and members of the staff may be brought together to plan a series of activities which would not only ease the transition, but would make the beginning teacher feel that he was welcome and wanted in the community.<sup>37</sup>

Eye and Lane state that:

A major purpose of an induction program is to help the teacher to succeed through gaining a knowledge and understanding of school and community. This knowledge and understanding support his efforts to become an effective teacher in the classroom and a competent member of the

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<sup>36</sup>Oliver Daniel Johns, "Characteristics of the Pre-School Conference in Selected Public School Systems in the United States," Unpublished Ed.D. Dissertation, University of Oklahoma, 1959.

<sup>37</sup>Harold S. Ferguson, "Personal Responsibilities of the Administrator," The American School Board Journal, (October, 1953), p. 46.

school staff.<sup>38</sup>

Chandler also emphasizes this view:

Effective teaching demands a knowledge of the diverse racial, ethnic, cultural, and social class groups in the community, the interaction of community groups, the ways in which people earn a living, the governmental structure, and many other facets of today's society.<sup>39</sup>

Olson says that many bad practices result from the assumption that beginners are fully qualified teachers. The assumption shapes the nature of the so called "orientation" program. Many schools operate such programs for new teachers, but few provide the beginner with the kind of assistance he really needs--an introduction to the community he will work in and the children he will be expected to reach. He thinks we often leave the new teacher alone to give him a chance to find himself. We do not pay attention to him unless he commits some blunder. In his words: "By showing the beginner through our inattention that the institution does not care for him as an individual, he may increasingly care less about the institution, his performance, and even his students."<sup>40</sup>

In a study of practices in the selection and retention of classroom teachers in North Central Association schools, Cox recommended six practices designed to help the

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<sup>38</sup>Glen G. Eye and Willard R. Lane, The New Teacher Comes to School, (New York: Harper Brothers, Publication, 1956), p. 90.

<sup>39</sup>Chandler, loc. cit., p. 162.

<sup>40</sup>Carl O. Olson, Jr., "Let's Stop Demoralizing Teacher," Peabody Journal of Education, Vol. XVII, No. 1, (July, 1968), pp. 18-23.

newly appointed teacher in adjusting to the work of school and community. He suggested the following be done:

(1) a policy of early assignment should be followed in order to provide adequate time for the new teachers to make unhurried and natural acquaintances with the school, with its program and with their co-workers, (2) after assignment, the school officials should supply the new teachers with any pertinent information or material available, (3) there should be a pre-school conference or seminar during which the new teachers are brought into the cooperative planning for the new year and provisions made for a continuous in-service education program in which the new teacher participates, (4) provisions should be made for new teachers to observe excellent teaching both within and without the school system, (5) informal association should be encouraged with co-workers, children, parents, and community life in order to provide the new teacher with opportunities to accept and be accepted, and (6) the administration should provide some protection against outside agencies or groups which frequently try to enlist the services of young teachers before they have mastered their teaching duties.<sup>41</sup>

An NEA Report states that:

The orientation of new teachers is something that cannot be done in a single day or in a matter of weeks. Meetings, briefings, picnics and other activities usually associated with the traditional orientation program are likely to be quickly forgotten by newcomers. An effective program, therefore, is one that is carried on as long as it benefits the new teacher.<sup>42</sup>

Megginson stresses the importance of the orientation period:

After being selected, the employee is introduced

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<sup>41</sup>Raymond Edward Cox, "Evaluation of Practices in Selecting and Retaining Classroom Teachers in North Central Association School Systems in Oklahoma," Unpublished Ed.D. Dissertation, Oklahoma University, 1958, p. 55.

<sup>42</sup>"Welcome to the New Teacher," NEA Journal, Vol. LII, No. 7, October 1963, p. 74.

into the organization through an orientation process. His period of adjustment is important and is often the 'trial' period, because during this time his acceptance or rejection by the old employees will be determined. Also, he will decide whether to 'accept' or 'reject' the organization itself. Management has a significant influence upon the adjustment of the new employee, whose success or failure is largely dependent upon the kind and the extent of the orientation program involved.<sup>43</sup>

Nigro says that if they are to be effective, Orientation programs, whether in anticipation of a single inductee or troops of them, should be carefully planned in advance. The appointed should never be left with the impression that his orientation was planned at the last minute or is being improvised.<sup>44</sup>

His views are supported by Burrup who feels effective programs of orientation achieve results in improving instruction and teacher morale. He thinks they are therefore worth the effort and the planning which they require.<sup>45</sup>

In a study of employee turnover in fifteen supermarkets in Ohio, Marion and Trieb found that:

Regression results identified significant relationships between job orientation and four measures of employee satisfaction: (1) satisfaction with company, (2) satisfaction of work expectations, (3) satisfaction of advancement expectations, and (4) satisfaction of job security expectations.

It is assumed that increased employee satisfaction

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<sup>43</sup>Leon C. Megginson, Personnel: A Behavioral Approach to Administration, (Homewood: Richard D. Irwin, Inc., 1967), p. 284.

<sup>44</sup>Nigro, loc. cit., p. 227.

<sup>45</sup>Percy E. Burrup, The Public System, (New York: Harper & Brothers, Publishers, 1960), p. 273.

will reduce employee turnover. The previous relationships suggested that thorough job orientation provides one means by which firms can effectively combat their turnover problems.<sup>46</sup>

Some of the major purposes of orientation meetings according to Steig and Frederick are:

(1) the development of better understanding about schools, subject matter and grades; (2) the acceleration of curriculum improvement through concentrated study; (3) the promotion of professional growth of teachers; (4) the intensive study of recent findings of child psychology and the consideration of implications of these findings for a school system devoted to the fuller realization of the potentialities of each child; (5) the improvement of teachings through the study of the methods used by successful teachers; (6) the analysis of new methods, procedures, and programs during the year, especially those that seem to be especially promising; and (7) to exchange ideas and methods.<sup>47</sup>

In addition, they say:

Orientation sessions serve to inform the new teacher of his responsibilities and duties in connection with the new teaching assignment. The discussion should include all the important day-to-day problems that the new teacher may confront in his work.<sup>48</sup>

In a doctoral study conducted at the University of Wisconsin, on the problems of the induction of beginning

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<sup>46</sup>B. W. Marion and S. E. Trieb, "Job Orientation, A Factor in Employee Performance and Turnovers," Personnel Journal, Vol. XVIII, No. 10, (October, 1969), p. 120.

<sup>47</sup>Lester Steig and E. Kemp Frederick, School Personnel and In-Service Training Practices, (West Nyack: Parker Publishing Company, Inc., 1969), pp. 90-91.

<sup>48</sup>Ibid., p. 92.

teachers, Lane found that:

(1) teachers with a high college grade point average wanted more information about the school and community than teachers with a low grade point average, (2) there is a significant positive correlation relationship between the teachers' satisfaction with the school and community and the amount of adequate information that they acknowledge having received, (3) teachers who received more adequate information concerning their school and community gave a higher rating of the school and community as a place to work than did teachers who received little or no information, and (4) there is a significant correlational relationship between a teacher's satisfaction with the school and his success.<sup>49</sup>

Eye and Lane say further that since the new teacher with better grades seeks more information about the school and community and since there seems to be a direct correlation between how much knowledge they receive and their job satisfaction, it would behoove the school administration to insure that new teachers are aware of unwritten policies and procedures. They feel that the new teachers will soon discover that while there are written policies in a teachers handbook, there are also many unwritten policies or traditions of the school. The school administration can continue to do nothing or virtually nothing to help new teachers during their first month in the school system. The administration may feel this help would be pampering them, but if the administration continues to ignore the fact that new teachers face a difficult and perplexing task in adjusting to the school and community, there will continue to be a high rate

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<sup>49</sup>Eye and Lane, loc. cit., p. 90.



of turnover on the teaching staff as well as unsatisfactory service from new teachers.<sup>50</sup>

McKenna emphasizes the point that orientation should begin immediately when the teacher selection becomes firm and should be a continuous process throughout the entire pre-tenure period, whether it be one, two, three or more years. The in-service training function itself might be defined in this theoretical context as continuous orientation and re-orientation.<sup>51</sup>

#### In-Service Education of New Teachers

Stark summarized the administration's role in in-service education as one that:

(1) helps define the purposes of in-service training, (2) establishes a creative atmosphere by his confidence towards his staff, (3) brings the problem into focus for all to see, (4) facilitates in starting a program, (5) works within the group in developing acceptance, (6) aids in putting the program into action, (7) provides for group evaluation and supervision, and (8) puts into operation the results of the program.<sup>52</sup>

Spears says the principles behind any program of in-service education are important. He states that the professional training of the teacher does not stop when he

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<sup>50</sup>Eye and Lane, loc. cit., p. 39.

<sup>51</sup>Bernard H. McKenna, Staffing the Schools, (New York: Bureau of Publications, Columbia University, 1965), p. 97.

<sup>52</sup>Richard T. Stark, "The Administrators Role in In-Service Training," National Association of Secondary School Principals Bulletin, Vol. XLIX, No. 303 (October, 1965, Washington, D.C.), p. 34.

leaves the college for his first employment, nor can his future professional development be adequately served by continuous teaching service alone. He further feels that school systems should provide opportunities for teachers to continue to grow on the job and that these activities when planned and co-ordinated can be called an in-service training program. It is a legitimate expenditure to provide for teacher training in the budget. The best of the in-service program lies in the improvement of the instruction and consequently in the improved development of the pupils. An in-service program that is cooperatively planned by administrators and teachers to meet a wide variety of educational needs saves the time and energy of all concerned and at the same time gives greater assurance of more functional outcomes.<sup>53</sup>

Cox recommends the following practices to insure professional growth of the teaching personnel:

(1) opportunities should be provided for the staff and representatives of the community to work together in identifying school and community needs and developing appropriate solutions to common problems, (2) teachers should be given opportunities and encouraged to participate in civic affairs of the community, (3) released time should be provided for professional conferences and educational workshops, (4) an adequate professional library should be provided and made easily accessible to all personnel, (5) the superintendent should take the lead in the organization of a program which will provide for the professional self-realization, and growth of his staff.<sup>54</sup>

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<sup>53</sup>Harold Spears, Improving the Supervision of Instruction, (Englewood Cliffs: Prentice Hall, 1953), pp. 358-360.

<sup>54</sup>Cox, loc. cit. pp. 232-233.

In-service education is not only the responsibility of the superintendent, but it reaches to the various levels of supervision. Moffitt says that the supervisor's role becomes that of a facilitator, a person who sets the stage for the act of people growing together. There is a shift of emphasis from directing teachers to studying teacher needs and establishing a climate that will be conducive to growth. This makes a wide departure from earlier supervisory responsibilities.<sup>55</sup>

Swearingin suggests that the three principal duties of the supervisor are: "(1) to determine teacher needs, (2) to establish cooperative action in attempts to solve problems and (3) to work for a sensitivity to change."<sup>56</sup>

In a study of current practices in five western states of schools serving Indian students, Benham found that over 60 per cent of the responses disclosed that the principal encouraged and facilitated the in-service growth of teachers and provided leadership in the improvement of the teaching learning situation to a full extent. He reported that 69.5 per cent of the districts responding indicated that to a full extent the district promoted in-service training for teachers by providing salary bonuses for graduate credit and

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<sup>55</sup>John Clifton Moffitt, In-Service Education for Teachers, (Washington D.C.: The Center for Applied Research in Education, Inc., 1963), p. 23.

<sup>56</sup>Mildred E. Swearingin, "Identifying Needs for In-Service Growth," Educational Leadership, Vol. XVII, No. 6, (March, 1960), pp. 332-335.

additional degrees. He also found that 57 per cent of the respondents made provision for the orientation of new teachers and teachers new to the system with part of the orientation including some consideration of the cultural background of the students served and the learning problems they face.<sup>57</sup>

One writer expresses the opinion that in-service training must be partially conducted outside the school system:

If in-service training is to change teachers in the ways that seem necessary, it must break free of the present educational model. It must provide, for instance, opportunity for teachers to experience the lives of the people they serve. It must include, in other words, some work experience in factories, businesses, social agencies and pawnshops. Teachers need to get out of schools for a while, for six to eight weeks during the academic year or for a summer or a semester.<sup>58</sup>

Perhaps teachers will not be able to guide their destinies in in-service education, curriculum development, or other educational matters until they become true professionals. At least two writers feel that the achievement of full professional status is possible, but not yet realized:

Teachers do tend to view themselves as members of an independent profession. They aspire to a high level of deference and respect. They think that they should be allowed to determine curriculum. They view themselves as being the best judge of

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<sup>57</sup>William J. Benham, "Characteristics of Programs in Public Schools Serving Indian Students from Reservations in Five Western States," Unpublished Ed.D. Dissertation, University of Oklahoma (1965), p. 46.

<sup>58</sup>Raymond H. Reno, "In-Service Teacher Training: A Critique, Not an Indictment," Education Age, Vol. V, No. 2, (November-December, 1968), pp. 2-5.

who should be recruited into teaching, and how these recruits should be trained. They would like to help decide the size of their own pay checks. Of course, the activities are quite otherwise. Teachers are hired by big employers. School boards and state departments make the major decisions about their work. Government agencies prescribe their training and decide who should be recruited. Outside agencies take the initiative in trying to improve the quality of their work and to raise the level of their qualifications. Boards and government departments prescribe the curricula of their daily lives; they supervise, inspect, and evaluate the product of the teachers work. No matter how bravely teachers may wish for the status of "independent professor," they are anchored firmly (though not irrevocably) in the status of service employees.<sup>59</sup>

In contrast to the foregoing, Bendinier thinks that teachers can become professionals and suggests that as professionals they do have certain responsibilities beyond self interest, including a responsibility for the general welfare of the school system. Teachers and other members of the professional staff have an interest in the conditions which attract and retain a superior teaching force, in the in-service training program in class size, in the selection of textbooks, and in other matters which go far beyond those which would be included in a narrow definition of working conditions. Negotiations should include all matters which affect the quality of the educational system.<sup>60</sup>

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<sup>59</sup>Frank W. Litz and Joseph J. Azzorelli, Editors, Struggle for Power in Education, (New York: The Center of Applied Research in Education, Inc., 1966), pp. 39-40.

<sup>60</sup>Robert Bendinier, The Politics of Schools, A Crisis in Self Government, (New York: Harper & Rowe, Publishers, 1969), pp. 104-105.

Bendinier cites the following statement of past NEA President Elizabeth D. Koontz: "If we are to be a profession, teachers must have a share in decision making, in policy determination and in shaping the education institutions. Professional negotiation is not a luxury, it is a necessity."<sup>61</sup>

### Teacher Turnover

Turnover is a general term relating to any loss of a teacher for any reason. There are many contributing factors to teacher turnover as pointed out by Silcock, "Whether turnover is regarded as a luxury, a necessity, or an evil, it is expensive."<sup>62</sup>

Nelson and Thompson list nineteen factors affecting turnover. This list includes money, discriminatory load on new teachers, extra-duty assignments and inadequate supervision.<sup>63</sup>

Fallberg gives a number of ways of identifying trouble spots which contribute to turnover in industry:

(1) are we losing desirable people in particular departments, locations or kinds of job? (2) is there a discernable pattern in the people we are losing? i.e., age, education, experience? (3) is there a relationship between those people we

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<sup>61</sup>Ibid.

<sup>62</sup>H. Silcock, "The Recording and Measurement of Labor Turnover," Journal of the Institute of Personnel Management, Vol. XXXVII (June, 1955), p. 332.

<sup>63</sup>Robert H. Nelson and Michael L. Thompson, "Why Teachers Quit: Factors Influencing Teachers to Leave Their Classrooms After the First Year," Clearinghouse, Vol. XXXVII, No. 8, (April, 1963), pp. 467-72.

lose and their evaluation or approvals? are we losing our "mistakes" or our high potential performers? (4) do our historical data agree with the above findings? have there been significant changes?<sup>64</sup>

Nelson and Thompson list eighteen factors relating to why so many trained teachers never teach or quit after teaching only one year:

(1) salary, (2) teaching loads, (3) assignment beyond regular classroom teaching, (4) inadequate supervision, (5) poor assignment given first year teachers, (6) discipline problems are often placed in classes of beginning teachers, (7) pressure groups, (8) poor mental hygiene, (9) marriage, (10) inadequate preparation or knowledge of subject in major or minor field of study, (11) inability to handle classes, (12) unfair teacher evaluation, (13) inadequate facilities, (14) poor faculty relationships, (15) routine clerical duties, (16) competition between schools and industry for trained personnel, (17) poor school boards, and (18) health.<sup>65</sup>

White noted the effect of negative pupil attitude on turnover of beginning teachers and suggested that socioeconomic differences are important in making assignments of beginning teachers.<sup>66</sup>

That the cultural, economic and academic level of their students does affect turnover of beginning teachers is further borne out by Herriott and St. John who studied schools in relation to their socioeconomic status. They divided the school into four socioeconomic classes and

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<sup>64</sup>Fallberg, op. cit., p. 46.

<sup>65</sup>Nelson and Thompson, op. cit., p. 468.

<sup>66</sup>Kinnard White, "Socioeconomic Factors and the Mobility of Beginning Elementary Teachers," Teachers College Journal, Vol. XXXVII (March, 1966), pp. 177-217.

obtained data from teachers and principals in these schools.

They concluded that:

Contrary to prediction, teachers in the lowest socioeconomic school category appear to enjoy more aspects of the work of the teacher than do teachers in higher socioeconomic categories, and they are not on the whole more critical than other teachers of professional aspects of their career. However, the data suggest that the difficulties of the present job--particularly the low academic performance of their pupils--produce teachers who, as predicted, have relatively low morale as a group, and as individuals are dissatisfied with many aspects of their job and relatively more eager to find different positions within the field of education.<sup>67</sup>

The importance of good teacher morale in reducing teacher turnover is well recognized. According to Yeager, "Morale is not easy to define, but its absence is easy to detect. It is that elusive something without which any organization will not function at its peak capacity."<sup>68</sup> In his words: "Morale is a significant building force in any organization. It seeks to utilize the abilities of all for the welfare of the whole. Morale is the essential accompaniment of success in any form."<sup>69</sup>

Deever indicates that effective teaching is to a considerable degree dependent upon the development of a strong professional staff working cooperatively under

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<sup>67</sup>Robert E. Herriott and Nancy Hoyt St. John, Social Class and the Urban School, (New York: John Wiley & Sons, Inc., 1966), p. 101.

<sup>68</sup>William A. Yeager, Administration of the Non-Instructional Personnel and Services, (New York: Harper & Brothers, Publishers, 1959), p. 154.

<sup>69</sup>Ibid., p. 155.



conditions which provide high morale and individual well being. The development of such a situation requires hard work, basic understanding, sound recruitment and selection of teachers, and skill in human relations.<sup>70</sup>

Miller states that working conditions of teachers are usually considered to include pupil-teacher ratio or teaching load, extra curricular assignments, physical facilities of the school building, materials and equipment provided for teaching, leaves of various kinds, ways of keeping up professionally, and opportunities for changes in assignment and promotion.<sup>71</sup>

Powell says human relations research documents the fact that it is not the physical working conditions that are of first importance, it is the psychological and sociological working environment of the individual that is major in influencing his work output. He states:

In sum, the importance of working conditions would appear principally to be a matter of the interpretation placed on the condition by the employer, rather than matter of direct connection between work done and the particular physical aspect of the employees situation.<sup>72</sup>

Butler thinks there is a problem of high teacher

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<sup>70</sup>Ray Mervin Deever, "An Analysis of Personnel Practices in Selected School Systems of the Southwest Region," Unpublished Ed.D. Dissertation, University of Oklahoma (1959), p. 2.

<sup>71</sup>Miller, op. cit., p. 307.

<sup>72</sup>Norman John Powell, Personnel Administration in Government, (Englewood Cliffs: Prentice Hall, Inc., 1956), p. 306.

turnover in many schools evidenced by the inability to retain teachers more than one or two years. There must be dissatisfaction with their teaching positions for these people, or they would not be so eager to leave the profession or to change their teaching position. He says:

School administrators must examine their relationships with beginning teachers, must find ways of permitting more classroom experimentation with new ideas that beginning teachers may have, and must involve beginning teachers in establishing or revising school policies if they expect to retain them in our schools. Unless new teachers feel that understanding and competent administrators accept them as professional people worthy of contributing to the welfare of the school, they will seek acceptance in another school or leave the teaching profession.<sup>73</sup>

Hermanowicz summarized the findings of thirteen separate research projects studying 312 teachers in their first three years of teaching in different parts of the country. Most of the teachers criticized their professional education courses. All valued their practice teaching experiences and would have liked more time in this aspect of their preparation program. Those (one half of the sample) whose first teaching job was in a different type of school than that in which they trained found adjustment difficult. The chief source of teaching help was veteran teachers. Most felt teacher orientation and in-service programs were highly desirable, but in practice were either poor or

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<sup>73</sup>Thomas M. Butler, "Satisfactions of Beginning Teachers," Clearinghouse, Vol. XXVI, No. 1, (September, 1961), p. 13.

nonexistent.<sup>74</sup>

Cox recommends the following practices to help retain competent teachers:

(1) a program for appropriate recognition of service, (2) adequate policies covering such items as sick leave, tenure, finding comfortable housing, (3) open lines of communication between teachers, supervisors, and the administration, with freedom to express individual views and tolerance for individual differences, (4) respect for teacher's preferences and the granting of such whenever possible, (5) light loads should generally be reserved for beginning teachers whenever possible, (6) opportunities provided for all teachers to participate in formulating policies which affect them, (7) teachers welfare committees to promote happiness and well-being among teachers, and (8) the administration should provide for the handling of grievances as promptly and effectively as possible.<sup>75</sup>

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<sup>74</sup>Henry J. Hermanowicz, "Pluralistic World of the Beginning Teachers," Kentucky School Journal: No. XLVL, (November, 1965), p. 37.

<sup>75</sup>Cox, op. cit., p. 233.

## CHAPTER III

### PRESENTATION AND ANALYSIS OF THE DATA

#### Procedure

The population for this study included all professional teachers recruited by the Bureau of Indian Affairs for the school year 1969-70. These teachers came from all sections of the United States and were assigned to one of eleven areas within the Bureau of Indian Affairs, Division of Education. Although some of them were recruited for a certain location, many were recruited to serve anywhere in the Bureau. They were assigned to areas, and then further assigned to agencies within the area. From the agency, they were then assigned to schools with existing vacancies.

The names and school addresses of all teachers recruited were obtained from the Bureau of Indian Affairs, Teacher Recruitment Section, and from eleven area offices. Survey instruments (Appendix II) were sent to 537 teachers. Four were returned as undeliverable. There were 533 instruments presumed to be received by the respondents. Of these, 375 or 70.4 per cent were returned. Nineteen were filled out and returned by teachers who indicated they were not first year teachers in the Bureau. It is not known how many failing to respond were not first year teachers. The remaining

356 of the returned survey instruments were used as valid responses from first year teachers, although not all respondents provided each item of personal data or replied to each set of questions. Chi square calculations for each hypothesis were made using the total number of responses to each item of personal data and each set of questions, resulting in some of the chi square calculations being made on the basis of a total number of responses less than 356.

Each area personnel office furnished the investigator a list of those teachers who terminated during the school year 1969-70 or before June 30, 1970. Of the 356 valid responses, 71 were from those who terminated and 285 from those remaining with the Bureau. Comparisons were made between those teachers who terminated during or at the end of the school year and those who remained with the Bureau for another year. The personal data obtained from Part I of the survey instrument were tabulated for those remaining and those terminating and placed in contingency tables. A chi square test for significance was used to determine the rejection or acceptance of Hypothesis 1 through Hypothesis 15. The chi square formula is  $X^2 = \text{sum of } \frac{(O-E)^2}{E}$ . The .01 level of significance was used to reduce the risk of incorrectly rejecting the null hypothesis.

Part II of the survey instrument was a questionnaire which included 53 questions divided into five sets designed to test Hypothesis 16 through Hypothesis 20. The

hypotheses were concerned respectively with the respondents' perceptions of pre-employment, orientation, employment conditions, supervisory conditions, and school assignment and living conditions in their first year of employment with the Bureau. The questions were answered by one of six responses: Strongly agree; Agree; Undecided; Disagree; Strongly disagree; and Does not apply. This selection of responses allowed the respondent to state his positive or negative feelings toward the question by degrees. A score for each individual respondent on each set of questions was determined by adding the points for that individual on each question within the set. This summated rating placed each individual on an agreement continuum on the set of questions. Individual scores were placed on a tabulation sheet and totals for those terminating and those remaining were transferred to a frequency distribution sheet. A mean was computed for those terminating and those remaining. Those above the mean were recorded as positive and those below the mean as negative. The positive and negative totals for each category were transferred to a contingency table and a chi square test for significance was used to determine the rejection or acceptance of the null hypothesis. Frequency distribution tables and the mean computations for Hypotheses 16 through Hypotheses 20 are shown in Appendix IV.

#### Treatment and Analysis of Data

To test Hypothesis 1, that there is no difference,

other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to age, respondents were grouped according to age and turnover categories as shown in Table I. The chi square of 7.240 (Table Ia) is significant at the .01 level of confidence with one degree of freedom, and Hypothesis 1 is therefore rejected. There was a significant difference in turnover with respect to age, with those under

TABLE I  
NUMBER OF RESPONDENTS ARRANGED ACCORDING  
TO AGE AND TURNOVER CATEGORIES

	Under 30	Over 30	Total
Remained	181	85	266
Terminated	59	11	70
Total	240	96	336

TABLE Ia  
COMPUTATION OF CHI SQUARE FOR AGE CATEGORIES

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	181	190	-9	81	0.426
2	85	76	9	81	1.140
3	59	50	9	81	1.620
4	11	20	-9	81	4.050
					$\chi^2 = 7.240$

30 terminating at a higher rate than over 30. The termination rate for those under 30 was 24.6 per cent as compared with 11.5 per cent of those over 30.

To test Hypothesis 2, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to sex, respondents were grouped according to sex and turnover categories as shown in Table II. The chi square of 7.465 (Table IIa) is significant with one

TABLE II  
NUMBER OF RESPONDENTS ARRANGED ACCORDING  
TO SEX AND TURNOVER CATEGORIES

	Male	Female	Total
Remained	120	165	285
Terminated	17	54	71
Total	137	219	356

TABLE IIa  
COMPUTATION OF CHI SQUARE FOR SEX CATEGORIES

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	120	110	10	100	0.909
2	165	175	-10	100	0.571
3	17	27	-10	100	3.703
4	54	44	10	100	2.272
					$\chi^2 = 7.465$



degree of freedom at the .01 level. The second Hypothesis is therefore rejected. There was a significant difference with respect to sex with females terminating at a higher rate than males. Only 12.4 per cent of the males terminated their services before June 30, 1970, while 24.7 per cent of the females vacated their teaching position during the year.

To test Hypothesis 3, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to marital status, respondents were grouped according to marital status and turnover categories as shown in Table III. The chi square of 2.629 (Table IIIa) is not significant at the .01 level with one degree of freedom, and Hypothesis 3 was not rejected. While the difference according to marital status was not significant at the .01 level, there was a difference with a higher percentage of single teachers terminating. The 24.5 per cent termination

TABLE III  
NUMBER OF RESPONDENTS ARRANGED ACCORDING TO  
MARITAL STATUS AND TURNOVER CATEGORIES

	Married	Single	Total
Remained	173	108	281
Terminated	36	35	71
Total	209	143	352

TABLE IIIa

## COMPUTATION OF CHI SQUARE FOR MARITAL STATUS CATEGORIES

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	173	167	6	36	0.215
2	108	114	-6	36	0.316
3	36	42	-6	36	0.857
4	35	29	6	36	1.241
					$X^2 = 2.629$

rate for single teachers compared with a 17.2 per cent rate for married teachers.

To test Hypothesis 4, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to ethnic origin, respondents were grouped according to ethnic origin and turnover categories as shown in Table IV. The presence of a frequency of 0, 1,

TABLE IV

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO  
ETHNIC ORIGIN AND TURNOVER CATEGORIES

	Black	Indian	Other	Total
Remained	2	12	258	272
Terminated	1	0	67	68
Total	3	12	325	340

TABLE IVa

## COMPUTATION OF CHI SQUARE FOR ETHNIC ORIGIN CATEGORIES

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	2	2	0	0	0.000
2	12	10	2	4	0.400
3	258	260	-2	4	0.015
4	1	1	0	0	0.000
5	0	2	-2	4	2.000
6	67	65	2	4	0.062
					$\chi^2 = 2.477$

and 2 in three of the six cells denies any valid interpretation of the chi square and no conclusions were reached concerning differences in turnover with respect to ethnic origin.

To test Hypothesis 5, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to the number of school age children in their families, respondents were grouped according to number of school age children and turnover categories as shown in Table V. The chi square of 5.166 (Table Va) is not significant at the .01 level with one degree of freedom and the hypothesis is therefore not rejected. Although there was no significant difference at the .01 level, the chi square of 5.166 is significant at the .05 level. Respondents without school age children terminated at a higher

rate, 22.3 per cent, than those with one or more children, 10.4 per cent.

TABLE V  
NUMBER OF RESPONDENTS ARRANGED ACCORDING  
TO NUMBER OF SCHOOL AGE CHILDREN IN  
FAMILY AND TURNOVER CATEGORIES

	No Children	1 or More Children	Total
Remained	216	69	285
Terminated	62	8	70
Total	278	77	355

TABLE Va  
COMPUTATION OF CHI SQUARE FOR NUMBER OF  
SCHOOL AGE CHILDREN IN FAMILY

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	216	223	-7	49	0.220
2	69	62	7	49	0.790
3	62	55	7	49	0.890
4	8	15	-7	49	3.266
					$\chi^2 = 5.166$

To test Hypothesis 6, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to years of experience, respondents were grouped according to years of experience and turnover

categories as shown in Table VI. The chi square of 3.960 (Table VIa) is not significant at the .01 level with two degrees of freedom and the Hypothesis is therefore not rejected. No significant difference in turnover was revealed with respect to years of experience. However there were some differences: teachers with one to five years of experience terminated at a higher rate (22.5 per cent) than those with no experience (17.8 per cent), and those with six-plus years of experience (13.3 per cent).

TABLE VI  
NUMBER OF RESPONDENTS ARRANGED ACCORDING TO YEARS  
OF EXPERIENCE AND TURNOVER CATEGORIES

	No Exp.	1-5 Yrs.	6 plus Yrs.	Total
Remained	60	155	65	280
Terminated	13	45	10	68
Total	73	200	75	348

TABLE VIa  
COMPUTATION OF CHI SQUARE FOR TEACHING EXPERIENCE

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	60	59	1	1	0.017
2	155	161	36	36	0.224
3	65	60	25	25	0.416
4	13	14	1	1	0.714
5	45	39	36	36	0.923
6	10	15	25	25	1.666
					$\chi^2 = 3.960$

To test Hypothesis 7, that there is no difference, other than chance, between those who terminated and those who remained with respect to general schedule entry grade, respondents were grouped according to entry grade and turnover categories as shown in Table VII. There are three entry grades used by the Bureau of Indian Affairs, Division of Education. They are GS-5 for beginning, no experience

TABLE VII

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO GENERAL  
SCHEDULE ENTRY LEVEL AND TURNOVER CATEGORIES

	GS-5	GS-7	GS-9	Total
Remained	41	122	122	285
Terminated	4	45	21	70
Total	45	167	143	355

TABLE VIIa

COMPUTATION OF CHI SQUARE FOR GENERAL SCHEDULE ENTRY LEVEL

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	41	36	5	25	0.694
2	122	134	-12	144	1.075
3	122	115	7	49	0.426
4	4	9	- 5	25	2.777
5	45	33	12	144	4.363
6	21	28	- 7	49	1.750
					$X^2=11.085$

teachers; GS-7 for beginning teachers with superior academic records, or teachers who have had at least one year's experience outside the Bureau but are not deemed to be master teachers; the GS-9 rating is reserved for teachers with experience who are rated as master teachers. The chi square of 11.085 (Table VIIa) is significant at the .01 level of confidence with two degrees of freedom and the Hypothesis is therefore rejected. There was a significant difference in termination rate of first year teachers with respect to entry grade. The termination rate for GS-7 teachers was 26.9 per cent as compared with a rate of 8.8 per cent for GS-5 and 14.7 per cent for GS-9.

To test Hypothesis 8, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to assignment in major field, respondents were grouped with respect to assignment in major

TABLE VIII

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO ASSIGNMENT IN MAJOR FIELD AND TURNOVER CATEGORIES

	Assigned to Major Field	Not Assigned to Major Field	Total
Remained	189	86	275
Terminated	45	24	69
Total	234	110	344

TABLE VIIIa

## COMPUTATION OF CHI SQUARE FOR ASSIGNMENT IN MAJOR FIELD

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	189	187	2	4	0.021
2	86	88	-2	4	0.045
3	45	47	-2	4	0.085
4	24	22	2	4	0.181
					$\chi^2 = 0.332$

field and turnover categories as shown in Table VIII. The chi square of 0.332 (Table VIIIa) is not significant at the .01 level of confidence, therefore, Hypothesis<sup>8</sup> is not rejected. No significant difference in turnover was revealed with respect to whether or not teachers were assigned in their major teaching fields. Although not particularly significant in this study, it may be noted that almost one-third of the respondents were not assigned in their major field.

To test Hypothesis 9, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to the size of community in which they were reared, respondents were grouped according to size of home community and turnover categories as shown in Table IX. The chi square of 1.993 (Table IXa) is not significant at the .01 level of confidence with two degrees of freedom,



therefore, Hypothesis 9 is not rejected. There was no significant difference in turnover with respect to size of home community. Although differences were not significant, teachers from rural areas terminated at a lower rate (14.9 per cent) than those from areas under 30,000 population (18.7 per cent) and areas over 30,000 (24.3 per cent).

TABLE IX

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO SIZE  
OF HOME COMMUNITY AND TURNOVER CATEGORIES

	Rural	Under 30,000	Over 30,000	Total
Remained	35	148	93	274
Terminated	6	34	29	69
Total	41	182	120	343

TABLE IXa

COMPUTATION OF CHI SQUARE FOR SIZE OF  
HOME COMMUNITY OF RESPONDENTS

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	33	2	4	0.121
2	148	145	3	9	0.062
3	91	96	-5	25	0.260
4	6	8	-2	4	0.500
5	34	37	-3	9	0.243
6	29	24	5	25	1.041
					$\chi^2 = 1.993$

To test hypothesis 10, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to the geographical regions from which they came, respondents were arranged according to geographical regions and turnover categories as shown in Table X.

TABLE X

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO  
REGIONAL ORIGIN AND TURNOVER CATEGORIES

	North- east	South- east	Mid- west	South- west	North- west	Total
Remained	75	29	92	38	35	269
Terminated	28	6	21	11	3	69
Total	103	35	113	49	38	338

TABLE Xa

COMPUTATION OF CHI SQUARE FOR REGIONAL  
ORIGIN OF RESPONDENTS

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	75	82	-7	49	0.597
2	29	28	1	1	0.036
3	92	90	2	4	0.044
4	38	39	-1	1	0.026
5	35	30	5	25	0.833
6	28	21	7	49	2.333
7	6	7	-1	1	0.142
8	21	23	-2	4	0.173
9	11	10	1	1	0.100
10	3	8	-5	25	3.125
					$\chi^2 = 7.409$

The chi square of 7.409 (Table Xa) is not significant at the .01 level of confidence with four degrees of freedom and the Hypothesis is therefore not rejected. There was no significant difference in turnover with respect to the geographical region from which respondents came.

Differences in the rate of turnover with respect to regional origins of respondents were further tested by considering each region in comparison with each other region. Chi square computations were made (shown in Appendix III) and the results are reported in Table Xb.

TABLE Xb  
RESULTS OF CHI SQUARE COMPUTATIONS FOR  
REGION BY REGION COMPARISON

Regions	Chi Square	Difference
Northeast & Southeast	1.821	Not significant at .01 level
Northeast & Northwest	5.356	Not significant at .01 level
Northeast & Southwest	0.622	Not significant at .01 level
Northeast & Midwest	2.646	Not significant at .01 level
Southeast & Midwest	0.901	Not significant at .01 level
Southeast & Southwest	0.533	Not significant at .01 level
Southeast & Northwest	2.050	Not significant at .01 level
Midwest & Southwest	1.820	Not significant at .01 level
Midwest & Northwest	2.376	Not significant at .01 level
Southwest & Northwest	3.126	Not significant at .01 level

Although not significant at the .01 level there were differences among regions, with the Northeast region showing the highest rate of termination, 27.2 per cent as compared with percentages of 7.8 for the Northwest, 17.1 for the Southeast, 18.6 for the Midwest, and 22.4 for the Southwest.

To test Hypothesis 11, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to method of referral to the Bureau, respondents were arranged according to the method of referral and turnover categories as shown in Table XI. The chi

TABLE XI

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO METHOD  
OF REFERRAL AND TURNOVER CATEGORIES

	Place- ment	Re- cruiter	Friend	Civ.Serv. Exam.	Other	Total
Remained	35	93	69	10	76	283
Terminated	7	26	14	6	18	71
Total	42	119	83	16	94	354

TABLE XIa

COMPUTATION OF CHI SQUARE FOR METHOD OF REFERRAL

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	34	1	1	0.294
2	93	95	-2	4	0.421
3	69	66	3	9	0.136
4	10	13	-3	9	0.692
5	76	75	1	1	0.013
6	7	8	-1	1	0.125
7	26	24	2	4	0.167
8	14	17	-3	9	0.529
9	6	3	3	9	3.000
10	18	19	-1	1	0.053
					$\chi^2 = 5.430$

square of 5.430 (Table XIa) is not significant at the .01 level of confidence with four degrees of freedom and the Hypothesis is therefore not rejected. There was no significant difference in turnover with respect to method of referral to the Bureau.

Differences in turnover with respect to the method of referral were further tested by considering each method in comparison with each other method. Chi square computations were made (shown in Appendix III) and the results are reported in Table XIb.

TABLE XIb  
RESULTS OF CHI SQUARE COMPUTATIONS FOR  
METHOD BY METHOD COMPARISONS

Methods	Chi Square	Difference
College Placement & Recruiter	0.774	Not significant at .01 level
College Placement & Friends	0.000	Not significant at .01 level
College Placement & Civil Serv. Exam.	1.898	Not significant at .01 level
College Placement & Other	0.214	Not significant at .01 level
Recruiter & Friends	0.519	Not significant at .01 level
Recruiter & Civil Serv. Exam.	1.520	Not significant at .01 level
Recruiter & Other	0.117	Not significant at .01 level
Friends & Civil Serv. Exam.	4.357	Not significant at .01 level
Friends & Other	0.147	Not significant at .01 level
Civil Serv. Exam. & Other	4.243	Not significant at .01 level

Although chi square computations showed no significant differences in turnover with respect to methods of

referral, some observations may be made. The lowest percentage of terminations was for those referred by college placement offices and friends, 16.6 per cent and 16.8 per cent respectively; the highest termination rate was for those referred by Civil Service Examination, 37.5 per cent.

To test Hypothesis 12, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to size of school to which assigned, respondents were arranged according to size of school and turnover categories as shown in Table XII. The chi square of 6.427 (Table XIIa) is not significant at the .01 level of confidence with four degrees of freedom. Hypothesis 12 therefore is not rejected. There was no significant difference in turnover with respect to size of school to which assigned.

TABLE XII

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO SIZE OF SCHOOL TO WHICH ASSIGNED AND TURNOVER CATEGORIES

	0-100	100-200	200-400	400-600	Over 600	Total
Remained	36	46	70	41	90	282
Terminated	11	16	15	13	13	68
Total	46	62	85	54	103	350

TABLE XIIa

## COMPUTATION OF CHI SQUARE FOR SIZE OF SCHOOL CATEGORIES

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	37	-2	4	0.108
2	46	50	-4	16	0.320
3	70	69	1	1	0.014
4	41	44	-3	9	0.205
5	90	83	7	49	0.590
6	11	9	2	4	0.444
7	16	12	4	16	1.333
8	15	16	-1	1	0.063
9	13	10	3	9	0.900
10	13	20	-7	49	2.450
				$\chi^2 =$	6.427

Differences in turnover with respect to size of school to which assigned were further tested by considering each size category in comparison with each other size category. Chi square computations were made (shown in Appendix III) and the results are reported in Table XIIb.

Although chi square computations showed no significant differences in turnover with respect to size of school to which assigned, the size category of "over 600" showed a lower termination rate, 12.6 per cent, than any of the other size categories. This rate compared with 23.9 per cent, 25.8 per cent, 17.6 per cent, and 24.1 per cent for the categories of 0-100, 100-200, 200-400 and 400-600 respectively.

TABLE XIib

RESULTS OF CHI SQUARE COMPUTATIONS FOR  
COMPARISONS OF SCHOOL SIZE CATEGORIES

School Size Categories	Chi Square	Difference
0-100 & 100-200	0.088	Not significant at .01 level
0-100 & 200-400	0.846	Not significant at .01 level
0-100 & 400-600	0.000	Not significant at .01 level
0-100 & Over 600	3.822	Not significant at .01 level
100-200 & 200-400	1.509	Not significant at .01 level
100-200 & 400-600	0.183	Not significant at .01 level
100-200 & Over 600	4.444	Not significant at .01 level
200-400 & 400-600	0.749	Not significant at .01 level
200-400 & Over 600	0.612	Not significant at .01 level
400-600 & Over 600	3.259	Not significant at .01 level

To test Hypothesis 13, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to the type of school to which assigned, respondents were arranged according to type of school and turnover categories as shown in Table XIII. The chi

TABLE XIII

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO TYPE  
OF SCHOOL ASSIGNED AND TURNOVER CATEGORIES

	Boarding	Day	Boarding/ Day	Total
Remained	136	93	38	267
Terminated	38	23	4	65
Total	174	116	42	332



Table XIIIa

## COMPUTATION OF CHI SQUARE FOR TYPE OF SCHOOL ASSIGNED

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	136	140	-4	16	0.114
2	93	93	0	0	0.000
3	38	34	4	16	0.470
4	38	34	4	16	0.470
5	23	23	0	0	0.000
6	4	8	-4	16	2.000
					$\chi^2 = 3.053$

square of 3.054 (Table XIIIa) is not significant at the .01 level of confidence with two degrees of freedom and the hypothesis is not rejected. There was no significant difference in turnover with respect to type of school to which assigned.

Differences in turnover with respect to type of school to which assigned were tested by considering each school type in comparison with each other school type. Chi square computations were made (shown in Appendix III) and the results are reported in Table XIIIb.

Although no significant differences in turnover were shown when considering all type categories, or when making comparisons between type categories, the termination rate for the boarding/day type was lowest at 9.5 per cent. This compares with termination rates of 21.8 per cent for "boarding" and 19.8 per cent for "day."

TABLE XIIIb  
RESULTS OF CHI SQUARE COMPUTATIONS FOR  
COMPARISONS OF SCHOOL TYPE CATEGORIES

School Type Category	Chi Square	Difference
Boarding & Day	0.190	Not significant at .01 level
Boarding & Boarding/Day	3.054	Not significant at .01 level
Day & Boarding/Day	2.085	Not significant at .01 level

To test Hypothesis 14, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to isolation of the school to which assigned, respondents were grouped according to isolation and turnover categories as shown in Table XIV. The chi square of 0.091 (Table XIVa) is not significant at the .01 level of confidence and Hypothesis 14 is therefore not rejected. There was no significant difference in turnover with respect to isolation of school assignment. The actual

TABLE XIV  
NUMBER OF RESPONDENTS ARRANGED ACCORDING TO ISOLATION  
OF SCHOOL ASSIGNMENT AND TURNOVER CATEGORIES

	Under 25 miles	Over 25 miles	Total
Remained	204	73	277
Terminated	50	20	70
Total	254	93	347

TABLE XIVa  
COMPUTATION OF CHI SQUARE FOR ISOLATION  
OF SCHOOL ASSIGNMENT

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	204	203	1	1	0.005
2	73	74	-1	1	0.014
3	50	51	-1	1	0.020
4	20	19	1	1	0.052
					$\chi^2 = 0.091$

percentage of termination were 19.7 for under 25 miles and 21.5 for over 25 miles.

To test Hypothesis 15, that there is no difference, other than chance, between teachers who remained in the Bureau and those who terminated during or at the close of the first year with respect to employment status of spouse, respondents were grouped according to employment status of spouse and turnover categories as shown in Table XV. The

TABLE XV  
NUMBER OF RESPONDENTS ARRANGED ACCORDING TO EMPLOYMENT  
OF SPOUSE AND TURNOVER CATEGORIES

	Spouse Emp. Locally	Spouse not Emp. Locally	Total
Remained	123	59	182
Terminated	26	13	39
Total	149	72	221

TABLE XVa

## COMPUTATION OF CHI SQUARE FOR EMPLOYMENT OF SPOUSE

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	123	123	0	0	0.000
2	59	59	0	0	0.000
3	26	26	0	0	0.000
4	13	13	0	0	0.000
					$\chi^2 = 0.000$

chi square of 0.0 is not significant at the .01 level of confidence and the Hypothesis is therefore not rejected. There was no significant difference in turnover with respect to employment status of spouse.

Hypotheses 16 through 20

Part II of the survey instrument provided data for testing Hypothesis 16 through Hypothesis 20.

Questions one through seven provided data for testing Hypothesis 16, that there is no difference, other than chance, between Bureau teachers who remained and those who terminated during or at the close of the first year with respect to their perceptions of the adequacy and accuracy of pre-employment information given them. The number of respondents arranged according to their perceptions of pre-employment information received and turnover categories is shown in Table XVI and the computation of chi square is

TABLE XVI

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO THEIR  
PERCEPTIONS OF PRE-EMPLOYMENT INFORMATION  
RECEIVED, AND TURNOVER CATEGORIES

	Positive	Negative	Total
Remained	132	125	257
Terminated	19	40	59
Total	151	165	316

TABLE XVIa

COMPUTATION OF CHI SQUARE FOR PRE-EMPLOYMENT INFORMATION

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	132	123	9	81	0.659
2	125	134	-9	81	0.604
3	19	28	-9	81	2.892
4	40	31	9	81	<u>2.612</u>
					$\chi^2 = 6.767$

shown in Table XVIa. The computations for determining the number of respondents with positive and negative perceptions of pre-employment information are shown in Appendix IV.

The obtained chi square of 6.767 is significant at the .01 level with one degree of freedom and Hypothesis 16 is therefore rejected. There was a significant difference in turnover between those who remained and those who terminated

with respect to their perceptions of the adequacy and accuracy of pre-employment information received, with those with negative perceptions terminating at a higher rate than those with positive. The rate of termination was 24.2 per cent for those with negative perceptions as compared with 12.5 per cent for those with positive. Although not pertinent to the questions raised in this study, it is worth noting that 165 out of 316, or 52.2 per cent of the respondents had negative perceptions of the pre-employment information which they received.

Questions eight through 16 of Part II of the survey instrument provided data for testing Hypothesis 17, that there is no difference, other than chance, between Bureau teachers who remained and those who terminated during or at the close of the first year with respect to their perceptions of the orientation program. The number of respondents arranged according to their perceptions of their orientation, and turnover categories is shown in Table XVII and the computation of chi square is shown in Table XVIIa. The computations for determining the number of respondents with positive and negative perceptions are shown in Appendix IV.

The obtained chi square of 0.637 is not significant at the .01 level of confidence with one degree of freedom and Hypothesis 17 is therefore not rejected. No significant difference was revealed between those who remained and those who terminated with respect to their perceptions

TABLE XVII

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO  
THEIR PERCEPTIONS OF THEIR ORIENTATION,  
AND TURNOVER CATEGORIES

	Positive	Negative	Total
Remained	136	146	282
Terminated	30	41	71
Total	166	187	353

TABLE XVIIa

COMPUTATION OF CHI SQUARE FOR ORIENTATION

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	136	133	3	9	0.068
2	146	149	-3	9	0.060
3	30	33	-3	9	0.272
4	41	38	3	9	0.237
					$\chi^2 = 0.637$

of the orientation program. The actual termination rates were 21.9 per cent for those with negative perceptions and 18.0 for those with positive. Of the total of 353 respondents, 187 or 52.9 per cent had negative perceptions of the orientation program.

Questions 17 through 32 of Part II of the survey instrument provided data for testing Hypothesis 18, that there is no difference, other than chance, between Bureau

teachers who remained and those who terminated during or at the close of the first year with respect to their perceptions of working conditions. The number of respondents arranged according to their perceptions of working conditions and turnover categories is shown in Table XVIII and the computation of chi square is shown in Table XVIIIa. The computations for determining the number of respondents with positive and negative perceptions are shown in Appendix IV.

TABLE XVIII

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO THEIR PERCEPTIONS OF WORKING CONDITIONS, AND TURNOVER CATEGORIES

	Positive	Negative	Total
Remained	103	181	284
Terminated	35	36	71
Total	138	217	355

TABLE XVIIIa

COMPUTATION OF CHI SQUARE FOR WORKING CONDITIONS

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	103	110	-7	49	0.445
2	181	174	7	49	0.281
3	35	28	7	49	1.750
4	36	43	-7	49	1.139
					$\chi^2 = 3.615$



The obtained chi square of 3.615 is not significant at the .01 level of confidence with one degree of freedom and Hypothesis 18 is therefore not rejected. No significant difference in turnover was revealed between those who terminated and those who remained with respect to their perceptions of working conditions. The percentage of those terminating with positive perceptions (25.4 per cent) was higher than those with negative perceptions (16.6 per cent). This strongly suggests that factors other than working conditions influenced teachers to remain with the Bureau. Although there was no significant difference at the .01 level of confidence, the difference was significant at the .05 level.

Also, as in the two preceding categories, the proportion of respondents with negative perceptions of employment conditions exceeded 50 per cent, in this case 60.9 per cent as compared with 52.2 for pre-employment information and 52.9 per cent for orientation.

Questions 33 through 44 of Part II provided data for testing Hypothesis 19, that there is no difference, other than chance, between teachers who remained and those who terminated during or at the close of the first year with respect to their perceptions of the supervisory program. The number of respondents arranged according to their perceptions of the supervisory program and turnover categories is shown in Table XIX and the computation of chi square is shown in Table XIXa. The computations for determining the

TABLE XIX

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO THEIR  
PERCEPTIONS OF SUPERVISORY PROGRAM,  
AND TURNOVER CATEGORIES

	Positive	Negative	Total
Remained	159	121	280
Terminated	31	39	70
Total	190	160	350

TABLE XIXa

COMPUTATION OF CHI SQUARE FOR SUPERVISORY PROGRAM

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	159	152	7	49	0.322
2	121	128	-7	49	0.383
3	37	38	-7	49	1.289
4	39	32	7	49	<u>1.531</u>
					$\chi^2 = 3.525$

number of respondents with positive and negative perceptions of the supervisory program are shown in Appendix IV.

The obtained chi square of 3.525 is not significant at the .01 level of confidence with one degree of freedom and Hypothesis 19 is therefore not rejected. No significant difference in turnover was revealed between those who remained and those who terminated with respect to their perceptions of the supervisory program. Although not significant

there was a slightly higher percentage of terminations for respondents with negative perceptions, 24.3 per cent as compared with 16.3 per cent for those with positive perceptions.

Also in contrast to the percentage of respondents with negative perceptions of pre-employment information (52.2 per cent), orientation (53.0 per cent), and working conditions (60.9 per cent), less than half (45.7 per cent) had negative perceptions of the supervisory program.

Questions 45 through 53 of Part II provided data for testing Hypothesis 20, that there is no difference, other than chance, between teachers who remained and those who terminated during or at the close of the first year with respect to their perceptions of school assignment and other working conditions. The number of respondents arranged according to their perceptions of the school assignment and other working conditions and turnover categories is shown in Table XX and the computation of chi square is shown in Table XXa. The computations for determining the number of respondents with positive and negative perceptions of school assignment and other working conditions are shown in Appendix IV.

The obtained chi square of 3.627 is not significant at the .01 level of confidence with one degree of freedom, and Hypothesis 20 is therefore not rejected. No significant difference in turnover was revealed between those who remained and those who terminated with respect to school assignment and living conditions.

TABLE XX

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO THEIR  
PERCEPTIONS OF SCHOOL ASSIGNMENT AND LIVING  
CONDITIONS, AND TURNOVER CATEGORIES

	Positive	Negative	Total
Remained	116	163	279
Terminated	21	50	71
Total	137	213	350

TABLE XXa

COMPUTATION OF CHI SQUARE FOR LIVING CONDITIONS

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	116	109	7	49	0.450
2	163	170	-7	49	0.288
3	21	28	-7	49	1.750
4	50	43	7	49	1.139
					$\chi^2 = 3.627$

Although not significant, there was a difference in the rate of termination between those with positive and those with negative perceptions. Those with negative perceptions terminated at a slightly higher rate (23.4 per cent) than those with positive perceptions (15.3 per cent).

The percentage of respondents with negative perceptions of school assignment and living conditions (60.8 per cent) was almost as high as the percentage having negative

perceptions of working conditions (60.9 per cent), and was notably higher than the percentages having negative perceptions of pre-employment information (52.2 per cent), orientation (53.0 per cent), and the supervisory program (45.7 per cent).

## CHAPTER IV

### SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### Summary

The purpose of this study was to determine the relationship between selected personal factors, and certain employment conditions as perceived by first year teachers in the Bureau of Indian affairs schools; and the turnover among these first year teachers. The names and addresses of all teachers employed for the first time during the school year beginning July 1, 1969, were obtained from the Bureau Recruiting Office in Albuquerque, New Mexico, and from each of the area offices of the Bureau of Indian Affairs.

A questionnaire was prepared and mailed to each of these teachers. Each area personnel office furnished the investigator with the names of those first year teachers who had left the Bureau between their initial employment date and June 30, 1970.

Of a total of 537 questionnaires sent to first year teachers, 375 or 69.8 per cent were returned. Of those questionnaires returned, 19 were from teachers with more than one year of experience in the Bureau. These 19 were not tabulated as valid returns. It is not known how many

of those failing to respond were teachers with more than one year of experience in the Bureau.

The questionnaire was divided into two parts. Part I was a personal data sheet, and Part II recorded responses to five sets of questions designed to reveal the perceptions of first year teachers concerning employment conditions in Bureau schools. Returned questionnaires were divided into two groups: those terminating on or before June 30, and those remaining after June 30. The questionnaire data were tabulated and the results placed in a contingency table for each hypothesis. A chi square test of significance was used and an .01 level of confidence was set for acceptance or rejection of each hypothesis.

Twenty null hypotheses were proposed to test two general questions: (1) Are there statistically significant differences between teachers who terminate their services before completing or at the end of one year of service and those who remain with the Bureau of Indian Affairs for more than one year with respect to: age, sex, marital status, ethnic origin, school age children in the family, years of teaching experience, GS schedule, assignment in major field, size of community in which reared, geographic region they call home, method of referral to the Bureau, size of school to which assigned, type of school to which assigned, isolation of the school, and employment status of the spouse? (2) Are there statistically significant differences between

teachers who terminate their services before completing or at the end of one year of service, and those who remain with the Bureau of Indian Affairs for more than one year with respect to their perceptions of pre-employment information received; orientation; employment conditions; supervision; and school assignment and living conditions?

From the data obtained from the questionnaire responses, comparisons were made between those teachers who remained for a second year and those who terminated during or at the end of the school year. The discrete data obtained from the personal data sheet, Part I of the questionnaire, were recorded on a contingency table and the chi square test for significance was used. Part II of the questionnaire contained five sets of questions. This portion of the instrument was designed to provide opportunity for respondents to make one of six responses to each of 53 questions. A summated rating scale was used to measure the intensity of responses. The scores were tabulated, placed on a frequency distribution and a mean computed for both those remaining and those terminating. Scores above the mean were treated as positive and those below the mean as negative. The number of positive and negative scores were then placed in a contingency table to compute the chi square test for significance, with the .01 level of confidence used to reject or accept all hypotheses.



### Findings

This study yielded the following findings concerning differences between first year Bureau of Indian Affairs teachers who terminated their employment with the Bureau during or at the close of the school year 1969-1970 and those who remained with the Bureau beyond June 30, 1970.

1. There was a significant difference at the .01 level between teachers who terminated and those who remained with respect to age. Teachers under 30 years of age terminated at a higher rate than those over 30, 20.4 per cent as compared with 11.5 per cent.

2. There was a significant difference at the .01 level between those who terminated and those who remained with respect to sex. Female teachers terminated at a higher rate than male teachers, 24.7 per cent as compared with 12.4 per cent.

3. Although difference in turnover with respect to marital status was not significant at the .01 level, married teachers terminated at a lower rate (17.2 per cent) than single teachers (24.4 per cent).

4. The presence of a frequency of 0, 1, and 2 in three of the six cells denies any valid interpretation of the chi square found in testing Hypothesis 4, concerning turnover and ethnic origin.

5. Although there was no significant difference in

turnover at the .01 level between those who terminated and those who remained with respect to the number of school age children in the family, the difference was significant at the .05 level. Teachers with no school age children terminated at a higher rate, 22.3 per cent, than those with one or more children, 10.3 per cent.

6. Although difference in turnover with respect to years of experience was not significant at the .01 level, those with 1-5 years of experience terminated at a higher rate (22.5 per cent) than those with no experience (17.8 per cent) and those with more than five years of experience (13.3 per cent).

7. There was a significant difference at the .01 level in the termination rates among teachers with different General Schedule entry grades. The termination rate of 26.3 per cent for GS-7, the middle grade, was almost three times the 8.9 per cent rate of GS-5, the lowest entry grade, and almost twice the 14.7 per cent of GS-9, the highest entry grade.

8. Although difference in turnover with respect to assignment in major field was not significant at the .01 level, those assigned in their major field terminated at a lower rate (14.9 per cent) than those not assigned to their major field (21.8 per cent). Almost one third (32.0 per cent) of the teachers were not assigned in their major field of study.

9. Although difference in turnover rate with respect to size of home community was not significant at the .01 level, teachers from rural areas terminated at a lower rate (14.6 per cent) than those from areas under 30,000 population (18.7 per cent), and those from population areas over 30,000 (24.3 per cent).

10. Although difference in turnover with respect to regional origin was not significant at the .01 level, there were some regional differences. The Northeast region showed the highest rate of termination, 27.1 per cent as compared with percentages of 7.8 for the Northwest, 17.1 for the Southeast, 18.5 for the Midwest and 22.8 for the Southwest.

11. Although difference in turnover with respect to method of referral was not significant at the .01 level, referral differences are apparent when stated as percentages. The civil service examination announcement shows the highest rate of termination, 37.0 per cent as compared with percentages of 21.9 per cent for recruiter, 19.0 per cent for other, 16.8 per cent for the friend method, and 16.3 per cent for the college placement method of referral.

12. Although difference in turnover with respect to size of school assignment was not significant at the .01 level, the largest school system category of "over 600" showed a lower termination rate (12.6) than any of the other size categories. This rate compared with 23.9 per cent,

25.7 per cent, 17.6 per cent, and 24.0 per cent for the categories of 0-100, 100-200, 200-400, and 400-600 respectively.

13. Although difference in turnover with respect to type of school to which assigned was not significant at the .01 level, the boarding/day school had the lowest rate of turnover (9.5 per cent) as compared with day school (19.8 per cent), and boarding school (21.8 per cent).

14. Difference in turnover with respect to isolation of school assignment was not significant at the .01 level. The percentages of termination were 19.6 for under 25 miles and 21.5 for over 25 miles.

15. Difference in turnover with respect to employment of spouse was not significant at the .01 level. Those whose husbands or wives were employed locally terminated at a rate of 17.4 per cent compared with a rate of 18.0 for those not employed locally.

16. There was a significant difference at the .01 level between teachers who terminated and those who remained with the Bureau with respect to their perceptions of the adequacy and accuracy of pre-employment information which they received. Those with negative perceptions terminated at a higher rate (24.2 per cent) than those with positive perceptions (12.5 per cent).

17. There was no significant difference at the .01 level between those who remained and those who terminated with respect to their perceptions of the orientation program.

The actual termination rates were 21.0 per cent for those with negative perceptions and 18.0 per cent for those with positive. Of the total of 353 respondents, 187 or 52.9 per cent had negative perceptions of the orientation program.

18. Although there was no significant difference at the .01 level between those who terminated and those who remained with respect to their perceptions of working conditions, the difference was significant at the .05 level. Teachers with positive perceptions terminated at a higher rate (25.4 per cent) than those with negative perceptions (16.6 per cent).

19. Although difference in turnover with respect to teachers' perceptions of the supervisory program was not significant at the .01 level, those with negative perceptions terminated at a higher rate (24.3 per cent) than those with positive perceptions (16.3 per cent).

20. Although differences in turnover with respect to teachers' perceptions of school assignment and living conditions was not significant at the .01 level, those with negative perceptions terminated at a slightly higher rate (23.4 per cent) than those with positive perceptions (15.3 per cent).

### Conclusions

1. While this study does not reveal any startling information about teachers' perceptions of teaching conditions

in the Bureau in relation to turnover of first year teachers, it does reveal levels of dissatisfactions in a number of areas which should be of concern to the Bureau.

2. The termination rate of first year teachers seems to be less related to those conditions subject to change and correction than to the personal characteristics of the teachers employed.

3. The relatively high dropout rate among the teachers represented in the GS-7 grade should be a matter of concern to the Bureau.

4. The composite teacher most likely to remain with the Bureau seems to be a male; over 30, with at least one school age child; six or more years teaching experience; entering the Bureau as a GS-9; from any region other than the Northeast; with a thorough pre-employment briefing.

5. Analysis of the data for Part II of the survey instrument indicates slightly more negative than positive perceptions of respondents toward the Bureau with respect to the categories of pre-employment information, orientation, working conditions, school assignment and living conditions.

### Recommendations

In view of the findings of this study, the following recommendations are offered:

1. Pre-employment information should be as complete and unbiased as possible. Recruiters and others should be

candid in the information given prospective teachers. It should cover negative as well as positive aspects of employment. This recommendation is in agreement with present Bureau policies.

2. Recruiting should be done principally in the Southwest, Midwest and Southeast regions.

3. Efforts should be made to improve the holding power of the Bureau among those quality teachers recruited at the GS-7 grade level.

4. Efforts should be expended to recruit male teachers, over 30 years of age, with prior teaching experience.

5. Every effort should be made to assign a teacher to a particular school and vacancy when he is employed, rather than assigning him to an area or agency to await a vacancy for which he is qualified. The use of a "pool" to hold teachers while awaiting a vacancy should be discontinued.

6. Agency and area office education personnel should make every effort to see that the new teacher feels wanted and important in his position.

7. The civil service examination should cease to be looked upon as an important source of teacher supply.

8. Working conditions should be continually improved at each school location, including hours of work, released summer time, and physical facilities.

9. School age children of employees should be

allowed to attend local Bureau schools on the same basis as Indian children where distance to the public school is excessive.

10. Efforts should be made to assign teachers in their major fields.

11. A study should be made to determine if psychological factors relating to the ethnic, racial, cultural, economic, and social background of the children have a significant effect on teacher turnover in the Bureau of Indian Affairs schools.



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## APPENDICES

**APPENDIX I**  
**Letters to Respondents**



Letter No. 1

P. O. Box 413  
Ignacio, CO 81137

December 4, 1969

Dear Fellow Employee:

I am trying to validate a survey instrument to be sent to all first year Bureau teachers in February or March.

First year teachers in the Shiprock area have been selected as a pre-validation group. Will you please fill out the enclosed data sheet and questionnaire and return to me immediately. Your suggestions on the use of additional questions or changes to those listed will be appreciated. You may write these suggestions at the bottom of each page.

Your answers will be held in strict confidence. No one will see your responses except me. Your replies will not be used in any report, but simply to help me make up a better questionnaire.

Sincerely yours,

Irvin R. Garrison

Enclosures

Letter No. 2

P. O. Box 413  
Ignacio, CO 81137

April 28, 1970

Dear Fellow Teacher:

The attached data sheet and questionnaire is designed to isolate some of the factors relating to the turnover of first year teachers in Bureau of Indian Affairs schools.

This study has been approved by the Division of Education, Bureau of Indian Affairs, but it is not a study conducted by the Bureau. Answers you give will be held in complete confidence, and although names are important for identification of non-returned questionnaires, you may be sure no names will be used in the report.

Part I is for background information, and Part II is designed to elicit a response from you that will indicate employment conditions in Bureau schools as you perceive them. The results of this survey will be made available to the Bureau and may be helpful in improving our schools.

Your personal and prompt attention to this questionnaire will be invaluable to the success of this study and will be greatly appreciated.

Sincerely yours,

Irvin R. Garrison

Attachments

## Follow-Up Letter No. 1

Dear Fellow Teacher:

Some time ago, you received a questionnaire from me pertaining to your employment conditions. There are currently two such surveys being made, one by the University of Oklahoma and one by me. My survey is being made independently of theirs and is a total population study, whereas, theirs covers only Navajo and Aberdeen.

I have sent out over 500 questionnaires. At this time over half of them have been returned. As you know, in a survey such as this, a 100% return is needed. Your answers are important. Won't you sit down and give the questionnaire fifteen minutes of your time. Your answers and those of all the new teachers employed for the school year 1969-70 may result in improvements within the Bureau of Indian Affairs. Almost half of all teachers employed for the first time leave the Bureau. We hope by this survey to be able to recommend changes in the education system that will result in a higher retention rate within the Bureau.

This survey is being made for a doctoral dissertation at Oklahoma University. A copy will be furnished the Bureau of Indian Affairs for its use. No names or other identification will be furnished them.

Sincerely yours,

Irvin R. Garrison

Follow-Up Letter No. 2

Dear

In the rush of school closing and summer vacation, I am sure you have overlooked returning the questionnaire I sent to you in April.

Over 300 have replied. I am sure you want to be included in this study. Won't you take a few minutes to fill out and return your questionnaire?

Sincerely yours,

Irvin R. Garrison

## **APPENDIX II**

### **Personal Data Sheet and Survey Instrument**

## Instructions

## Personal Data Sheet and Survey Questionnaire

You are being asked to respond to a data sheet and a list of situations related to your employment as a teacher or counselor in a Bureau of Indian Affairs school.

Please fill out the data sheet as correctly as possible and indicate the degree to which you agree or disagree with the statements on the questionnaire by circling one of the following alternative responses ranging from Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree and Does Not Apply.

- (SA) Strongly Agree indicates that you agree with the statement with almost no exceptions.
- (A) Agree indicates that you agree with the statement with some exceptions.
- (U) Undecided indicates that you could either "agree" or "disagree" with the statement with about an equal number of exceptions in either case.
- (D) Disagree indicates that you disagree with the statement with some exceptions.
- (SD) Strongly Disagree indicates that you disagree with the statement with almost no exceptions.
- (DNA) Does Not Apply indicates you do not feel the question applies in your case.

### An Example (Circle response)

1. A choice of school assignment  
was given me at the time I  
was recruited. SA A U D SD DNA

## PART I

### Personal Data

This data sheet should be filled out completely by all teachers employed in the Bureau during the 1969-70 school year for the first time. This information is important to our survey. Please check it carefully.

Name \_\_\_\_\_ Age \_\_\_\_\_ Male \_\_\_\_\_ Female \_\_\_\_\_

Married \_\_\_\_\_ Single \_\_\_\_\_ Divorced \_\_\_\_\_ Widowed \_\_\_\_\_

Ethnic Origin: Indian \_\_\_\_\_ Black \_\_\_\_\_ Other \_\_\_\_\_

Number of school age children \_\_\_\_\_

Circle highest: No Degree Bachelors Masters Doctors

Circle highest years of teaching experience: 0 1-5 6 plus

Please circle your answer:

1. Civil Service Entry Grade: GS-5 GS-7 GS-9

2. Were you assigned teaching duties in your major field?  
Yes No

3. Please check assignment: Elementary \_\_\_\_\_ Secondary \_\_\_\_\_

4. Circle the size of city in which you grew up:

a. less than 1,000 d. 10,000-20,000 f. over 30,000

b. 1,000-5,000 e. 20,000-30,000 g. rural area

c. 5,000-10,000

5. What do you consider to be your home state: \_\_\_\_\_

6. Please check how you were referred to the Bureau of Indian Affairs.

( ) Placement Office ( ) Recruiter ( ) Friend

( ) Civil Service Examination Announcement ( ) Other

( ) By BIA school to which assigned

## 7. Size of school in which you are teaching:

0-100

100-200

200-400

400-600

Over 600

## Type of school in which you are teaching:

Boarding\_\_\_\_\_

Day\_\_\_\_\_

Boarding/Day\_\_\_\_\_

8. Is your school twenty five miles or more from the nearest town offering complete medical, spiritual and recreational facilities? Yes\_\_\_\_\_ No\_\_\_\_\_
9. Is your spouse employed locally? Yes\_\_\_\_\_ No\_\_\_\_\_
10. If employed, is he or she employed by the BIA? Yes\_\_\_\_ No\_\_\_\_



## PART II

### Survey Questionnaire

(SA) Strongly Agree      (A) Agree      (U) Undecided  
(D) Disagree      (SD) Strongly Disagree      (DNA) Does Not Apply

#### PRE-EMPLOYMENT INFORMATION

- |   | SA | A | U | D | SD | DNA |
|---|----|---|---|---|----|-----|
| 1. The person who recruited me gave an accurate picture of the Bureau's educational system.                             |    |   |   |   |    |     |
| 2. The conditions I encountered were very much like those explained to me by the recruiter.                             |    |   |   |   |    |     |
| 3. The recruiter fully explained the fringe benefits of teaching in the Bureau to me.                                   |    |   |   |   |    |     |
| 4. The recruiter made me fully aware of the characteristics of the area in which I would live.                          |    |   |   |   |    |     |
| 5. The recruiter made me fully aware of the problems of teaching culturally disadvantaged children in an Indian school. |    |   |   |   |    |     |
| 6. The person who contacted me gave me ample opportunity to ask questions about the Bureau.                             |    |   |   |   |    |     |
| 7. The person who recruited me did not attempt to over-sell the Bureau and its virtues to me.                           |    |   |   |   |    |     |

## ORIENTATION

- |     |   |    |   |   |   |    |     |
|-----|---|----|---|---|---|----|-----|
| 8.  | The orientation I received was adequate.  | SA | A | U | D | SD | DNA |
| 9.  | The orientation program helped me understand my teaching assignment better.   | SA | A | U | D | SD | DNA |
| 10. | The orientation I received adequately prepared me for the conditions I encountered at my school assignment.         | SA | A | U | D | SD | DNA |
| 11. | The rules and regulations of the school were explained to me adequately.  | SA | A | U | D | SD | DNA |
| 12. | The school administration made a strong effort to help me get acquainted with the community.                        | SA | A | U | D | SD | DNA |
| 13. | The school administration made a strong effort to help me get acquainted with my fellow employees.                  | SA | A | U | D | SD | DNA |
| 14. | The orientation I received by my immediate supervisor was adequate.   | SA | A | U | D | SD | DNA |
| 15. | The orientation I received helped me to understand the type of students I encountered in the classroom.             | SA | A | U | D | SD | DNA |
| 16. | The information I received in the orientation period from my supervisor and others was realistic and helpful to me. | SA | A | U | D | SD | DNA |

## WORKING CONDITIONS

- |     |   |    |   |   |   |    |     |
|-----|---|----|---|---|---|----|-----|
| 17. | Extra curricular activities assigned were meaningful to the students and to myself. | SA | A | U | D | SD | DNA |
|-----|---|----|---|---|---|----|-----|

- |     |   |    |   |   |   |    |     |
|-----|---|----|---|---|---|----|-----|
| 18. | The extra curricular assignment given me was well suited to my interests and abilities.                               | SA | A | U | D | SD | DNA |
| 19. | Extra duty assignments were commensurate with my basic work load.   | SA | A | U | D | SD | DNA |
| 20. | My duties and responsibilities in extra curricular assignments were fully explained to me by my immediate supervisor. | SA | A | U | D | SD | DNA |
| 21. | I was fully aware of the working conditions in Bureau schools before I accepted my position.                          | SA | A | U | D | SD | DNA |
| 22. | The school provides adequate equipment and supplies for me to carry out my teaching assignment.                       | SA | A | U | D | SD | DNA |
| 23. | My salary is commensurate with those beginning teachers in other systems.   | SA | A | U | D | SD | DNA |
| 24. | The physical conditions of the school plant were excellent.   | SA | A | U | D | SD | DNA |
| 25. | I found my job about as I expected it to be when I was employed.  | SA | A | U | D | SD | DNA |
| 26. | I was given freedom to be innovative in the classroom.  | SA | A | U | D | SD | DNA |
| 27. | Full participation in community life is encouraged by my supervisor and the school administration.                    | SA | A | U | D | SD | DNA |
| 28. | Older teachers exchanged teaching ideas with me that were valuable in helping me do a better teaching job.            | SA | A | U | D | SD | DNA |
| 29. | The opportunity to meet with community leaders was afforded me by the school administration.                          | SA | A | U | D | SD | DNA |

- |     |  |    |   |   |   |    |     |
|-----|--|----|---|---|---|----|-----|
| 30. | The interaction of teachers and employees at my school created a good esprit de corps. | SA | A | U | D | SD | DNA |
| 31. | I found that older Bureau teachers readily accepted me as a co-worker.                 | SA | A | U | D | SD | DNA |
| 32. | I received helpful guidance from older Bureau teachers.                                | SA | A | U | D | SD | DNA |

## SUPERVISORY PROGRAM

- |     |   |    |   |   |   |    |      |
|-----|---|----|---|---|---|----|------|
| 33. | My supervisor explained my duties thoroughly to me.   | SA | A | U | D | SD | DNA  |
| 34. | My supervisor offered helpful, valuable suggestions about my teaching.                                      | SA | A | U | D | SD | DNA  |
| 35. | My supervisor encouraged me to use my own initiative in teaching my classes.                                | SA | A | U | D | SD | DNA  |
| 36. | I have frequently, on my own initiative, voluntarily sought my supervisor's aid.                            | SA | A | U | D | SD | DNA  |
| 37. | I believe my teaching is more effective, because of proper supervisory assistance.                          | SA | A | U | D | SD | DNA  |
| 38. | The supervisor at my school has a positive, helpful attitude towards those he supervises.                   | SA | A | U | D | SD | DNA  |
| 39. | The supervisor has been helpful in providing the necessary materials and equipment that I needed.           | SA | A | U | D | SD | DNA[ |
| 40. | The supervisor worked in the role of co-professional and not as an authority.                               | SA | A | U | D | SD | DNA  |
| 41. | My supervisor has been helpful in giving me a clear understanding of the goals and objectives of my school. | SA | A | U | D | SD | DNA  |

- |     |   |    |   |   |   |    |     |
|-----|---|----|---|---|---|----|-----|
| 42. | My supervisor adequately explained the school personnel policies to me in the orientation period. | SA | A | U | D | SD | DNA |
| 43. | Education specialists from my school and agency have given me adequate help and assistance.       | SA | A | U | D | SD | DNA |
| 44. | My immediate supervisor gave me adequate help in solving student problems that I encountered.     | SA | A | U | D | SD | DNA |

#### SCHOOL ASSIGNMENT AND LIVING CONDITIONS

- |     |   |    |   |   |   |    |     |
|-----|---|----|---|---|---|----|-----|
| 45. | I was given a voice in the selection of the school location for my first assignment.                        | SA | A | U | D | SD | DNA |
| 46. | I consider my assigned living quarters as adequate.   | SA | A | U | D | SD | DNA |
| 47. | I had a choice of school assignment at the time I was recruited.  | SA | A | U | D | SD | DNA |
| 48. | I was given the area, school location and teaching assignment before I accepted a position with the Bureau. | SA | A | U | D | SD | DNA |
| 49. | I was fully aware of the isolation factors of my school location before accepting the job.                  | SA | A | U | D | SD | DNA |
| 50. | There are numerous social activities in which I can participate with other teachers.                        | SA | A | U | D | SD | DNA |
| 51. | There are numerous opportunities for social activities in the community.                                    | SA | A | U | D | SD | DNA |
| 52. | My children have a good school to attend near where I work.   | SA | A | U | D | SD | DNA |
| 53. | My children have numerous opportunities for social activities in the community.                             | SA | A | U | D | SD | DNA |

### **APPENDIX III**

**Tables and Computations of Chi Square for Cell by  
Cell Analysis of Hypotheses 10, 11, 12, and 13.**

## HYPOTHESIS 10

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO  
REGIONAL ORIGIN AND TURNOVER CATEGORIES

## Northeast and Southeast

	Northeast	Southeast	Total
Remained	75	29	104
Terminated	28	6	34
Total	103	35	138

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	75	78	-3	9	0.115
2	29	26	3	9	0.346
3	28	25	3	9	0.360
4	6	9	-3	9	1.000
					$\chi^2 = 1.821$

## Northeast and Midwest

	Northeast	Midwest	Total
Remained	75	92	167
Terminated	28	21	49
Total	103	113	216

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	75	80	-5	25	0.312
2	92	87	5	25	0.287
3	28	23	5	25	1.086
4	21	26	-5	25	0.961
				$\chi^2 =$	2.646

## Northeast and Southwest

	Northeast	Southwest	Total
Remained	75	38	113
Terminated	28	11	39
Total	103	49	152

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	75	77	2	4	0.051
2	38	36	-2	4	0.111
3	28	26	-2	4	0.153
4	11	13	2	4	0.307
				$\chi^2 =$	0.622



## Northeast and Northwest

	Northeast	Northwest	Total
Remained	75	35	110
Terminated	28	3	31
Total	103	38	141

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	75	80	-5	25	0.312
2	35	30	5	25	0.833
3	28	23	5	25	1.086
4	3	8	-5	25	3.125
					$\chi^2 = 5.356$

## Southeast and Midwest

	Southeast	Midwest	Total
Remained	29	92	121
Terminated	6	21	27
Total	35	113	148

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	29	27	2	4	0.148
2	92	94	-2	4	0.042
3	6	8	-2	4	0.500
4	21	19	2	4	0.211
					$\chi^2 = 0.901$

## Southeast and Southwest

	Southeast	Southwest	Total
Remained	29	38	67
Terminated	6	11	17
Total	35	49	84

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	29	28	1	1	0.035
2	38	39	-1	1	0.251
3	6	7	-1	1	0.142
4	11	10	1	1	0.100
					$\chi^2 = 0.533$

## Southeast and Northwest

	Southeast	Northwest	Total
Remained	29	35	64
Terminated	6	3	9
Total	35	38	73

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	29	31	-2	4	0.129
2	35	33	2	4	0.121
3	6	4	2	4	1.000
4	3	5	-2	4	0.800
					$\chi^2 = 2.050$

## Midwest and Southwest

	Midwest	Southwest	Total
Remained	92	38	130
Terminated	21	11	32
Total	113	49	162

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	92	91	1	1	0.109
2	38	39	-1	1	0.256
3	21	22	-1	1	0.455
4	11	10	1	1	1.000
					$\chi^2 = 1.820$

## Midwest and Northwest

	Midwest	Northwest	Total
Remained	92	35	127
Terminated	21	3	24
Total	113	38	151

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	92	95	-3	9	0.095
2	35	32	3	9	0.281
3	21	18	3	9	0.500
4	3	6	-3	9	1.500
					$\chi^2 = 2.376$

## Southwest and Northwest

	Southwest	Northwest	Total
Remained	38	35	73
Terminated	11	3	14
Total	49	38	87

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	38	41	-3	9	0.220
2	35	32	3	9	0.281
3	11	8	3	9	1.125
4	3	6	-3	9	1.500
					$\chi^2 = 3.126$

## HYPOTHESIS

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO  
METHOD OF REFERRAL AND TURNOVER CATEGORIES

## College Placement Office and Recruiter

	College Place- ment Office	Recruiter	Total
Remained	35	93	123
Terminated	7	26	33
Total	42	119	161

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	33	2	4	0.121
2	93	95	-2	4	0.042
3	7	9	-2	4	0.444
4	26	24	2	4	0.167
					$X^2 = 0.774$

## College Placement Office and Friends

	College Place- ment Office	Friends	Total
Remained	35	69	104
Terminated	7	14	21
Total	42	83	125

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	35	0	0	0.000
2	69	69	0	0	0.000
3	7	7	0	0	0.000
4	14	14	0	0	0.000
					$X^2 = 0.000$

College Placement Office and Civil  
Service Examination Announcement

	College Place- ment Office	Civil Service Examination Announcement	Total
Remained	35	10	45
Terminated	7	6	13
Total	42	16	58

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	33	2	4	0.121
2	10	12	-2	4	0.333
3	7	9	-2	4	0.444
4	6	4	2	4	1.000
					$X^2 = 1.898$

## College Placement Office and Other

	College Place- ment Office	Other	Total
Remained	35	76	111
Terminated	7	18	25
Total	42	94	136

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	34	1	1	0.029
2	76	77	-1	1	0.001
3	7	8	-1	1	0.125
4	18	17	1	1	0.059
					$\chi^2 = 0.214$

## Recruiter and Friends

	Recruiter	Friends	Total
Remained	93	69	162
Terminated	26	14	40
Total	119	83	202



## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	93	95	-2	4	0.042
2	69	67	2	4	0.060
3	26	24	2	4	0.167
4	14	16	-2	4	0.250
					$X^2 = 0.519$

## Recruiter and Civil Service Examination Announcement

	Recruiter	Civil Service Examination Announcement	Total
Remained	93	10	103
Terminated	26	6	32
Total	119	16	135

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	93	91	2	4	0.444
2	10	12	-2	4	0.333
3	26	28	-2	4	0.143
4	6	4	2	4	1.000
					$X^2 = 1.520$

## Recruiter and Other

	Recruiter	Other	Total
Remained	93	76	169
Terminated	26	18	44
Total	119	94	213

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	93	94	-1	1	0.011
2	76	75	1	1	0.013
3	26	25	1	1	0.040
4	18	19	-1	1	0.053
					$\chi^2 = 0.117$

## Friends and Civil Service Examination Announcement

	Friends	Civil Service Examination Announcement	Total
Remained	69	10	79
Terminated	14	6	20
Total	83	16	99

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	69	66	3	9	0.136
2	10	13	-3	9	0.692
3	14	17	-3	9	0.529
4	6	3	3	9	<u>3.000</u>
					$\chi^2 = 4.357$

## Friends and Others

	Friends	Other	Total
Remained	69	76	145
Terminated	14	18	32
Total	83	94	177

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	69	68	1	1	0.015
2	76	77	-1	1	0.013
3	14	15	-1	1	0.066
4	18	19	1	1	<u>0.053</u>
					$\chi^2 = 0.147$

## Civil Service Examination Announcement and Other

	Civil Service Examination Announcement	Other	Total
Remained	10	76	86
Terminated	6	18	24
Total	16	94	110

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	10	13	-3	9	0.692
2	76	73	3	9	0.123
3	6	3	3	9	3.000
4	18	21	-3	9	0.428
					$\chi^2 = 4.243$

## HYPOTHESIS

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO SIZE OF  
SCHOOL TO WHICH ASSIGNED AND TURNOVER CATEGORIES

0-100 -- 100-200

	0-100	100-200	Total
Remained	35	46	81
Terminated	11	16	21
Total	46	62	108

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	35	0	0	0.000
2	46	47	-1	1	0.021
3	11	11	0	0	0.000
4	16	15	-1	1	0.067
					$\chi^2 = 0.088$

0-100 -- 200-400

	0-100	200-400	Total
Remained	35	70	105
Terminated	11	15	26
Total	46	85	131

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	37	-2	4	0.108
2	70	68	2	4	0.059
3	11	9	2	4	0.444
4	15	17	-2	4	0.235
					$\chi^2 = 0.846$

0-100 -- 400-600

	0-100	400-600	Total
Remained	35	41	76
Terminated	11	13	24
Total	46	54	100

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	35	0	0	0.000
2	41	41	0	0	0.000
3	11	11	0	0	0.000
4	13	13	0	0	0.000
					$\chi^2 = 0.000$

## 0-100 -- Over 600

	0-100	Over 600	Total
Remained	35	90	125
Terminated	11	13	24
Total	46	103	149

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	35	39	-4	16	0.410
2	90	86	4	16	0.186
3	11	7	4	16	2.285
4	13	17	-4	16	0.941
					$\chi^2 = 3.822$

## 100-200 -- 200-400

	100-200	200-400	Total
Remained	46	70	116
Terminated	16	15	31
Total	62	85	147

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	46	49	-3	9	0.183
2	70	67	3	9	0.134
3	16	13	3	9	0.692
4	15	18	-3	9	0.500
					$\chi^2 = 1.509$

100-200 -- 400-600

	100-200	400-600	Total
Remained	46	41	87
Terminated	16	13	29
Total	62	54	116

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	46	47	-1	1	0.021
2	41	40	1	1	0.025
3	16	15	1	1	0.066
4	13	14	-1	1	0.071
					$\chi^2 = 0.183$



## 100-200 -- Over 600

	100-200	Over 600	Total
Remained	46	90	136
Terminated	16	13	29
Total	62	103	165

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	46	51	-5	25	0.490
2	90	85	5	25	0.294
3	16	11	5	25	2.272
4	13	18	-5	25	1.388
					$X^2 = 4.444$

## 200-400 -- 400-600

	200-400	400-600	Total
Remained	70	41	111
Terminated	15	13	28
Total	85	54	139

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	70	68	2	4	0.058
2	41	43	-2	4	0.093
3	15	17	-2	4	0.235
4	13	11	2	4	<u>0.363</u>
					$X^2 = 0.749$

## 200-400 -- Over 600

	200-400	Over 600	Total
Remained	70	90	160
Terminated	15	13	28
Total	85	103	188

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	70	72	-2	4	0.056
2	90	88	2	4	0.054
3	15	17	-2	4	0.235
4	13	15	-2	4	<u>0.267</u>
					$X^2 = 0.612$

## 400-600 -- Over 600

	400-600	Over 600	Total
Remained	41	90	131
Terminated	13	13	26
Total	54	103	157

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	41	45	-4	16	0.335
2	90	86	4	16	0.186
3	13	9	4	16	1.777
4	13	17	-4	16	0.941
					$\chi^2 = 3.259$

## HYPOTHESIS 13

NUMBER OF RESPONDENTS ARRANGED ACCORDING TO TYPE OF  
SCHOOL TO WHICH ASSIGNED AND TURNOVER CATEGORIES

## Boarding -- Day

	Boarding	Day	Total
Remained	136	93	229
Terminated	38	23	61
Total	174	116	290

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) $(O-E)^2$	(6) $\frac{(O-E)^2}{E}$
1	136	137	-1	1	0.014
2	93	92	1	1	0.108
3	38	37	1	1	0.027
4	23	24	-1	1	0.041
					$X^2 = 0.190$

## Boarding -- Boarding/Day

	Boarding	Boarding/Day	Total
Remained	138	38	174
Terminated	38	4	42
Total	174	42	216

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	136	140	-4	16	0.114
2	38	34	4	16	0.470
3	38	34	4	16	0.470
4	4	8	-4	16	2.000
					$\chi^2 = 3.054$

## Day -- Boarding/Day

	Day	Boarding/Day	Total
Remained	93	38	131
Terminated	23	4	27
Total	116	42	158

## Chi Square Computations

(1) Cell	(2) O	(3) E	(4) O-E	(5) (O-E) <sup>2</sup>	(6) $\frac{(O-E)^2}{E}$
1	93	96	-3	9	0.093
2	38	35	3	9	0.257
3	23	20	3	9	0.450
4	4	7	-3	9	1.285
					$\chi^2 = 2.085$

#### **APPENDIX IV**

##### **Computations of the Means for Testing Hypotheses 16 through 20**

## HYPOTHESIS 16

COMPUTATIONS OF THE MEANS FOR QUESTIONS ONE THROUGH SEVEN  
(HYPOTHESIS 16) RELATING TO PRE-EMPLOYMENT INFORMATION  
FOR THOSE TERMINATING AND THOSE REMAINING

## REMAINED

(1) INTERVALS	(2) MIDPOINTS X	(3) FREQUENCIES F	(4) SUM OF TERMS FX
31-25	33	18	576
26-30	28	55	1,540
21-25	23	59	1,357
16-20	18	65	1,170
11-15	13	32	416
6-10	8	17	136
1- 5	3	<u>11</u>	<u>33</u>
		F = 257	FX = 5,228
Mean = 20.3			
Above the Mean 132			
Below the Mean 125			

## TERMINATED

(1) INTERVALS	(2) MIDPOINTS X	(3) FREQUENCIES F	(4) SUM OF TERMS FX
31-35	33	1	33
26-30	28	7	196
21-25	23	11	253
16-20	18	25	450
11-15	13	10	130
6-10	8	2	16
1- 5	3	<u>3</u>	<u>9</u>
		F = 59	FX = 1,087
Mean = 18.4			
Above the Mean 19			
Below the Mean 40			



## HYPOTHESIS 17

COMPUTATIONS OF THE MEANS FOR QUESTIONS EIGHT THROUGH  
SIXTEEN (HYPOTHESIS 17) RELATING TO THE ORIENTATION  
PROGRAM FOR THOSE TERMINATING AND THOSE REMAINING

## REMAINED

(1) INTERVALS	(2) MIDPOINTS X	(3) FREQUENCIES F	(4) SUM OF TERMS FX
46-50	48	5	240
41-45	43	6	258
36-40	38	22	836
31-35	33	48	1,584
26-30	28	55	1,540
21-25	23	53	1,219
16-20	18	40	720
11-15	13	35	455
6-10	8	17	136
1- 5	3	<u>1</u>	<u>3</u>
		F = 282	FX = 6,991
Mean = 24.8			
Above the Mean 136			
Below the Mean 146			

## TERMINATED

(1) INTERVALS	(2) MIDPOINTS X	(3) FREQUENCIES F	(4) SUM OF TERMS FX
41-45	43	0	0
36-40	38	1	38
31-35	33	8	264
26-30	28	11	308
21-25	23	10	230
16-20	18	21	378
11-15	13	9	117
6-10	8	10	80
1- 5	3	<u>1</u>	<u>3</u>
		F = 71	FX = 1,467
Mean 19.9			
Above the Mean 30			
Below the Mean 41			

## HYPOTHESIS 18

COMPUTATIONS OF THE MEANS FOR QUESTIONS SEVENTEEN  
THROUGH THIRTY TWO (HYPOTHESIS 18) RELATING TO  
THE WORKING CONDITIONS FOR THOSE TERMINATING  
AND THOSE REMAINING

## REMAINED

(1) INTERVALS	(2) MIDPOINTS X	(3) FREQUENCIES F	(4) SUM OF TERMS FX
86-90	88	1	88
81-85	83	0	0
76-80	78	2	156
71-75	73	2	146
66-70	68	8	544
61-65	63	14	882
56-60	58	30	1,740
51-55	53	46	2,438
46-50	48	50	2,400
41-45	43	40	1,720
36-40	38	34	1,292
31-35	33	27	891
26-30	28	19	532
21-25	23	9	207
16-20	18	2	36
11-15	13	0	
6-10	8		
1- 5	3		
		<u>F = 284</u>	<u>FX = 12,972</u>
Mean = 45.7			
Above the Mean		103	
Below the Mean		181	

## TERMINATED

(1) INTERVALS	(2) MIDPOINTS X	(3) FREQUENCIES F	(4) SUM OF TERMS FX
66-70	63	2	126
61-65	58	5	290
56-60	53	4	212
51-55	48	7	336
46-50	43	11	473
41-45	38	7	266
36-40	33	9	297
31-35	28	12	336
26-30	23	6	138
21-25	18	3	54
16-20	13	3	39
11-15	8	1	8
6-10	5	1	5
1- 5	3	0	0
		<u>71</u>	<u>2,588</u>
		F = 71	FX = 2,588
	Mean = 40		
	Above the Mean	35	
	Below the Mean	36	

## HYPOTHESIS 19

COMPUTATIONS OF THE MEANS FOR QUESTIONS THIRTY THREE  
THROUGH FORTY FOUR (HYPOTHESIS 19) RELATING TO  
THE SUPERVISORY PROGRAM FOR THOSE TERMINATING  
AND THOSE REMAINING

## REMAINED

(1) INTERVALS	(2) MIDPOINTS X	(3) FREQUENCIES F	(4) SUM OF TERMS FX
56-60	58	15	870
51-55	53	16	848
46-50	48	39	1,872
41-45	43	56	2,408
36-40	38	33	1,254
31-35	33	38	1,254
26-30	28	29	812
21-25	23	22	503
16-20	18	21	378
11-15	13	9	117
6-10	8	1	8
1- 5	3	1	3
		<u>280</u>	<u>10,330</u>
		F = 280	FX = 10,330
		Mean = 36.9	
		Above the Mean	121
		Below the Mean	159

## TERMINATED

(1) INTERVALS	(2) MIDPOINTS X	(3) FREQUENCIES F	(4) SUM OF TERMS FX
66-70	68	1	68
61-65	63	0	0
56-60	58	3	174
51-55	53	4	212
46-50	48	8	384
41-45	43	12	516
36-40	38	3	114
31-35	33	9	297
26-30	28	12	336
21-25	23	4	92
16-20	18	7	126
11-15	13	5	65
6-10	8	1	8
1- 5	3	1	3
		<u>70</u>	<u>2,395</u>
		F = 70	FX = 2,395
	Mean = 34.2		
	Above the Mean	39	
	Below the Mean	31	

## HYPOTHESIS 20

COMPUTATIONS OF THE MEANS FOR QUESTIONS FORTY FIVE  
THROUGH FIFTY THREE (HYPOTHESIS 20) RELATING  
TO THE SCHOOL ASSIGNMENT AND LIVING  
CONDITIONS FOR THOSE TERMINATING  
AND THOSE REMAINING

## REMAINED

(1) INTERVALS	(2) MIDPOINTS X	(3) FREQUENCIES F	(4) SUM OF TERMS FX
46-50	48	1	48
41-45	43	1	43
36-40	38	2	76
31-35	33	12	396
26-30	28	34	952
21-25	23	66	1,518
16-20	18	87	1,566
11-15	13	57	741
6-10	8	16	128
1- 5	3	<u>3</u>	<u>9</u>
		F = 279	FX = 5,477
Mean = 19.6			
Above the Mean 116			
Below the Mean 163			

## TERMINATED

(1) INTERVALS	(2) MIDPOINTS X	(3) FREQUENCIES F	(4) SUM OF TERMS FX
36-40	38	1	38
31-35	33	0	0
26-30	28	2	56
21-25	23	18	414
16-20	18	25	450
11-15	13	18	234
6-10	8	5	40
1- 5	3	2	6
		F = 71	FX = 1,238
Mean = 17.4			
Above the Mean 21			
Below the Mean 50			



**2**

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