AN EVALUATION OF INSTITUTIONAL VOCATIONAL TRAINING RECEIVED BY AMERICAN INDIANS THROUGH THE MUSKOGEE, OKLAHOMA AREA OFFICE OF THE BUREAU OF INDIAN AFFAIRS

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PREFACE

The purpose of this dissertation is to evaluate the manpower training received by American Indians through the Muskogee, Oklahoma Area Office of the Bureau of Indian Affairs. It is unique among manpower evaluations for several reasons. First, it is the only evaluation to date that concerns the American Indian. (This is unfortunate because the economic problems facing the Indian are worse, relatively speaking, than those facing any other racial component of the nation's nonwhite population.) (Second, the methodology differs from the usual control group technique used in manpower evaluations. This evaluation employs a pre-post technique which has the merit of holding the individual constant in determining the effectiveness of training.) (Third, the length of the evaluation periods exceed those of other evaluations.) While the normal evaluation period is twelve or eighteen months, this evaluation includes periods of up to 100 months. Finally, it is the first evaluation of a federally-sponsored training program that is administered in a different manner than MDTA or ARA. One of the great benefits of the Bureau of Indian Affairs' program is that there are no minimum course enrollments, all courses are conducted in recognized vocational training institutions, and all courses are taught by full-time vocational education instructors.

This evaluation could not have been conducted on the scale that it was without financial support. I am very grateful to the Manpower Administration of the U. S. Department of Labor for providing this support through a dissertation grant under the provisions of the Manpower Development and Training Act of 1962. As required by law, the following statement is included.

> "The material in this project was prepared under a Grant from the Manpower Administration, U. S. Department of Labor, under the authority of Title I of the Manpower Development and Training Act of 1962. Researchers undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment. Therefore, points of view or opinions stated in this document do not necessarily represent the official position or policy of the Department of Labor."

I would like to express my gratitude to the many employees of the Bureau of Indian Affairs who contributed to the research. From the very beginning, great demands were made of the Bureau of Indian Affairs. The response, in every case, was excellent and always accompanied by a genuine interest in the research and a willingness to cooperate. The Indian is indeed fortunate that the Bureau of Indian Affairs is staffed by such capable and dedicated personnel.

Several employees of the Bureau deserve special thanks for their contributions. Mr. Virgil N. Harrington and Mr. C. C. Carshall, the Director and Assistant Director of the Muskogee Area Office, made the research possible by authorizing that all records be placed at my disposal. To Mr. Jack P. Jayne, the Muskogee Area Employment Assistance Officer, and his excellent staff must go a very special expression of

thanks. Mr. Jayne and his staff were always willing to take any amount of time from busy schedules to insure a meaningful and completely objective evaluation of training.

I would like to express my appreciation for the guidance given by the following members of the faculty: Dr. Larkin B. Warner, who provided many helpful suggestions and contributed so generously of his time; Dr. John C. Shearer, whose critical reading of the dissertation contributed so much to its clarity; Dr. Robert L. Sandmeyer and Dr. John C. Egermeier, for their interest and suggestions.

Final thanks must go to my wife, Patty. It was her constant encouragement and sacrifice that made the degree possible and, indeed, worthwhile.

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CHAPTER I

INTRODUCTION

In 1956, Congress passed Public Law 959 which established a vocational training program for American Indians. The training began in 1958, and since then more than 19,000 Indians have received vocational training. There has been, however, almost no attempt to determine if this training has helped the Indian, whose unemployment and low income problems are relatively worse than those of any other nonwhite group in the nation. This dissertation will provide the needed evaluation of Public Law 959 training.

The purpose of the first two sections of this introductory chapter is to examine the factors leading to the passage of P. L. 959. These factors include the general problem of unemployment and the economic condition of the nonwhite worker in the American economy. The third section contains a brief description of P. L. 959. The chapter concludes with a statement of the purpose of the dissertation and a discussion of the organization of the research.

The Unemployment Problem

In February 1966, the unemployment rate for the United States dropped to 3.7 per cent--its lowest point in thirteen

years. During the first quarter of 1966, the gross national product reached an all-time high of $721 billion and gave every evidence of continuing to rise. To the average American, February 1966 was a time of full-time employment, high income, and general economic well-being.

To the almost three million Americans who were unemployed, however, February 1966 was not a period of well-being. Moreover, the future employment prospects looked no brighter because many of these would-be workers were members of certain disadvantaged groups of the population that had long experienced high rates of unemployment. These groups include the unskilled, the nonwhite, and the young workers entering the labor market for the first time.

The total annual cost to the economy resulting from the unemployment of these disadvantaged groups runs in the billions of dollars. Among the costs of this unemployment are the following: (1) the value of the goods and services these unemployed could have produced; (2) the savings to the government, and ultimately the taxpayer, of reduced welfare expenditures; (3) the suffering and the loss in human dignity resulting from workers sitting at home collecting welfare funds; (4) the delinquency and crime produced by idleness and the desire to achieve a higher standard of living than provided by welfare; (5) the large cost of providing for adults and children placed in homes for the retarded, mental hospitals, prisons, and other such institutions; (6) the loss in future productivity of dependents of the unemployed who

are not provided with the proper physical, emotional, or social attributes of a strong and healthy labor force.

While it is hard to monetize many of the above costs, a single example is illustrative. On the basis of past experience, the U. S. Department of Labor calculated that a 3.2 per cent change in blue-collar employment would be associated with a 7 per cent change in real gross national product. If it can be assumed that the majority of the unemployed would enter blue-collar occupations if employed, this alone would mean a greater than $50 billion annual increase in the gross national product.[1]

The significance of the costs of unemployment cannot be over-emphasized. If the economy is to achieve maximum growth, it must somehow solve this problem of unemployment and the unused capacity that it represents. Fortunately, however, the federal government has recognized the problem and has taken steps to correct it.

The public policies enacted by the federal government to deal with unemployment and its many problems encompass an extremely wide range of activities. One group of activities includes guidance and counseling services and the recently enacted Project Head Start. Another group includes training programs such as those implemented primarily through the Manpower Development and Training Act of 1962 (MDTA) and the

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[1]U.S., Department of Labor, Manpower Report of the President (Washington: U.S. Government Printing Office, 1966), p. 30.

Area Redevelopment Act of 1961 (ARA). The policies which are found among this latter group attempt to correct that portion of unemployment produced by lack of skills and training. Such unemployment is widespread, largely because the American economy in the twentieth century has been characterized by enormous structural changes. These changes have caused many workers to be structurally and technologically unemployed and, at the same time, have continuously raised the minimum educational and skill level required of workers entering the labor force for the first time.[2] One attempt to solve this problem of deficiency of skilled labor has been to provide programs to train or retrain portions of the labor force.

The training programs of MDTA and ARA are somewhat different. The Area Redevelopment Act (ARA) established a four-year program in 1961 to aid areas of high chronic unemployment such as the Appalachian Mountain region and the upper Michigan peninsula. Under its provisions, unemployed persons selected for training could receive up to sixteen weeks' subsistence payments while training at the government's expense. The MDTA training efforts were much broader in scope and provided, among other things, a maximum training period of fifty-two weeks and allowance for travel to the place of training. In 1963, the MDTA was amended to broaden its cov-

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[2]For a discussion of structural unemployment, see Charles C. Killingsworth, "Automation, Jobs, and Manpower," in Labor and the National Economy, ed. by William G. Bowen (New York: W. W. Norton & Company, Inc., 1965), pp. 124-136.

erage and improve the training and opportunities it offered.

The Nonwhite Worker

In commenting on the effects of ARA, MDTA, and the other policies enacted to deal with the diverse problems of unemployment, special attention is always given to the nonwhite worker. The reason is, of course, that unemployment and underemployment is much higher among nonwhites than among whites.

To most Americans a nonwhite worker is an American Negro--even though the Census of Population includes other racial elements among nonwhite workers. It is ironical that many persons forget that one of these racial categories relates to the descendants of the original population of the North American continent. That he would be forgotten is unfortunate because the American Indian has a lower income and experiences more unemployment, relatively speaking, than any element of the nonwhite population, including the Negro.

In Table 1-1 some important social and economic characteristics are compared for the white, Negro, and American Indian populations of the United States in 1960. The data indicate that the unemployment rate for Indians was almost twice that of Negroes while the 1959 Indian median family income was about $300 less than that of the Negro. The median years of school completed by the Negro, while very low when compared to the educational attainment of the white population, surpasses that of the Indian. Moreover, the Indian

TABLE 1-1

SELECTED SOCIAL AND ECONOMIC CHARACTERISTICS OF THE WHITE, NEGRO, AND AMERICAN INDIAN POPULATIONS OF THE UNITED STATES, 1959-1960

Item	White	Negro	American Indian
Median school years completed by persons 25 years old and over			
Male	10.7	8.3	8.2
Female	11.2	8.9	8.3
Per cent of the male civilian labor force unemployed in 1960	4.6	8.9	16.2
Median family income in 1959	$5,893	$3,047	$2,727
Per cent distribution of family income in 1959			
Under $1,000	4.5	15.8	22.5
$1,000 - 2,999	14.1	33.5	31.8
3,000 - 4,999	20.0	25.2	21.4
5,000 - 6,999	23.9	14.0	13.0
7,000 - 9,999	21.3	8.0	7.7
10,000 -14,999	11.2	2.9	2.9
15,000 and over	5.0	.6	.7
	100.0	100.0	100.0

Sources: U. S. Bureau of the Census, U. S. Census of Population: 1960, Subject Reports, Nonwhite Population by Race, Final Report PC(2) - 1C.

U. S. Bureau of the Census, U. S. Census of Population: 1960, General Social and Economic Characteristics, U. S. Summary, Final Report PC(1) - 1C.

unemployment rate is somewhat misleading because it represents an average for all Indian areas in the country. Great differences do, in fact, exist among the areas. In 1958, for example, the unemployment rate for the Tongue River and Rocky Boy Indian Reservations in Montana were, respectively, 81.5 and 90 per cent.[3] In Oklahoma, on the other hand, the Indian unemployment rate in 1960 was 13.3 per cent, almost 3 per cent below the national average for Indians.

Indian Manpower Policy

The problem of Indian unemployment and its accompanying poverty has been recognized by the federal government, and special policies have been enacted in an attempt to help the Indian. Unlike the national policies such as ARA and MDTA, however, there has been very little public awareness and interest in these special policies.

The major policy enacted to deal with Indian unemployment is Public Law 959 which was passed in 1956, some six years prior to MDTA. This law provides that a vocational training program be established by the Bureau of Indian Affairs. Two types of training for American Indians are involved: (1) on-the-job training (OJT) provided by businesses and (2) adult vocational training (AVT) provided by recognized institutions of vocational education. The maximum

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[3]William A. Brophy and Sophie D. Aberle, compilers, The Indian, America's Unfinished Business (Norman, Oklahoma: The University of Oklahoma Press, 1966), p. 68.

length of both training programs is twenty-four months, and provisions are made for transportation and subsistence for the trainee and family during training.

Purpose of the Dissertation

There have been numerous research projects which have evaluated and are currently evaluating aspects of ARA and MDTA training.[4] There has been almost no attempt, however, to evaluate the vocational training provided under P. L. 959. This seems surprising in light of the fact that such an evaluation might produce policy recommendations applicable to ARA and MDTA training.

The purpose of this dissertation is to evaluate the adult vocational training received by Indians under Public Law 959. The AVT portion was chosen for evaluation at the suggestion of Bureau of Indian Affairs personnel who believe

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[4]Some examples of the completed evaluations are the following: J. Paschal Twyman and John C. Egermeir, "An Assessment of Selected Area Redevelopment Training Programs in Oklahoma," (unpublished report of the Research Foundation, Oklahoma State University, November, 1962); Gerald D. Somers and Ernst Stromsdorfer, "Benefit-Cost Analysis of Manpower Retraining," Proceedings of the Seventeenth Annual Meeting of the Industrial Relations Research Association (New York, 1956), pp. 172-186; and John Chernick, Bernard P. Indik, and Roger Craig, The Selection of Trainees under MDTA (New Brunswick, New Jersey: Institute of Management and Labor Relations, Rutgers - The State University). The Manpower Administration is currently sponsoring a great deal of manpower research, some of it concerning ARA and MDTA. A list and description of this research can be found in U. S., Department of Labor, Manpower Research Projects Sponsored by the U. S. Department of Labor, Manpower Administration through June 30, 1966 (Washington: U. S. Government Printing Office, November, 1966).

that of the two types of training, the institutional training will have far greater impact in curing the unemployment and income problems of the Indian. This feeling was based on considerations of the number of Indians trained and the nature and quality of the training received.

The actual evaluation of training will consist of the following activities: (1) testing the hypothesis that Indians who receive institutional training do not benefit in terms of employment experience and income levels;[5] (2) testing the hypothesis that variation in employment experience and income levels among trainees can be explained by a set of independent variables other than the receipt of training; and (3) development of Indian manpower policy recommendations warranted by the above analysis.

The evaluation will be based on the performance of American Indians who have received institutional training through the Muskogee, Oklahoma Area Office of the Bureau of Indian Affairs. The Muskogee Area Office was chosen for the following reasons: (1) it is reasonably near Stillwater, Oklahoma; (2) all trainees in Oklahoma are processed in this office; (3) the Assistant Area Director expressed great interest in the study and authorized that all trainee records be placed at the disposal of the investigator; and (4) a sizeable num-

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[5]The hypothesis is stated in the negative because of the statistical procedure used to determine the effects of a process or treatment, such as vocational training, when applied to an item or person. Robert G. D. Steel and James H. Torrie, Principles and Procedures of Statistics (New York: McGraw-Hill Book Company, Inc., 1960), p. 65.

ber of Indians, about 670, have received AVT training through this office.

The study consists of seven chapters. Because the great majority of Indians receiving institutional training were from Oklahoma, Chapter II surveys the history and culture of the Oklahoma Indian so that the evaluation of training will be able to proceed with a proper perspective.

Chapter III concerns the background and administration of P. L. 959. The historical development of Indian vocational training and the forces behind the evaluation of P. L. 959 are discussed. The administration of the law by personnel of the Bureau of Indian Affairs is outlined, with special attention given to the method of selection of trainees. The chapter will conclude with a brief discussion of the extent of use of P. L. 959 since 1958.

Chapter IV presents the methodology of the study. Criteria of training evaluation are discussed, and the specific means of evaluation is described. Because this study uses much original data, the methods of data collection are reviewed in detail.

The actual evaluation of training is the topic of Chapters V and VI. Chapter V examines the social and economic characteristics of the trainees. In Chapter VI, the two specific hypotheses of evaluation are tested. These are (1) the hypothesis of no benefit from training and (2) the hypothesis that a set of independent variables other than the receipt of training can explain variation in employment ex-

perience and income levels among the trainees.

The final chapter contains the policy recommendations warranted by the statistical evaluation in Chapters V and VI and by supplementary comments made by the trainees themselves. An attempt is made to separate recommendations which are politically feasible from those which are not.

CHAPTER II

THE OKLAHOMA INDIAN

While this dissertation seeks to evaluate a vocational training act passed to help American Indians, such an evaluation will be incomplete unless it is tempered by an understanding of the trainees themselves. Specifically, this means an understanding of the American Indians residing primarily in the state of Oklahoma.

The history of Oklahoma is irrevocably tied to the history of the many different Indian tribes and cultures which have dwelled in the land area now occupied by the state. Indeed, the word Oklahoma means "red people" in the Choctaw language. The impact of the Indian in Oklahoma history is great, and it was only with statehood in 1907 that the white man's influence clearly surpassed that of the red man.

Given his past influence, it is apparent that the modern Oklahoma Indian cannot be studied solely as a product of the twentieth century. In order to appreciate and understand the problems and present conditions of the modern Oklahoma Indian, it is necessary to have a knowledge of his past.

This chapter will not attempt to develop a complete social, political, and economic history of the Oklahoma Indian. Rather, its purpose is to account for the presence of

the Indian in the state and to cite those relevant historical facts that seem to explain the economic status of the present-day Indian.

The chapter will be organized chronologically. The first portion concerns the creation of Indian Territory and is followed by a description of the causes and circumstances surrounding the arrival of the Five Civilized Tribes. The third part examines the period during the Civil War and Reconstruction--an extremely important period in Oklahoma history. The next section discusses the coming of statehood and its effects on the Indian. The chapter concludes with a discussion of the condition of the Oklahoma Indian in the twentieth century.

The Creation of Indian Territory

Oklahoma has long been the home of the Indian, although until recently not many tribes have occupied the area at any one time. The accounts of Coronado and the early explorers of the area list only six tribes that were apparently native to the state.[1]

The important history of the Oklahoma Indian begins about 1800 when the expansion of the frontier produced pressure on all land east of the Mississippi River. The solution to this problem was found in the Louisiana Purchase of

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[1]These tribes were the Wichitas, Apaches, Caddos, Pawnees, Quapaws, and Osages. Arrell M. Gibson, Oklahoma, A History of Five Centuries (Norman, Oklahoma: Harlow Publishing Corporation, 1965), p. 24-41.

1804. One of the uses that President Jefferson hoped to make of the immense Louisiana Territory was to develop an Indian colonization zone where Indians east of the Mississippi could exchange their lands for new lands west of the river. To this end, Congress created a poorly defined colonization zone which was called "Indian Country" and included parts of present-day Kansas, Missouri, Arkansas, and Oklahoma. Beginning in 1808, a few Indians began to emigrate voluntarily to "Indian Country." Among these were the Senecas, Quapaws, Kickapoos, Delawares, and Shawnees.[2]

By 1830, white settlements west of the Mississippi had grown so as to seriously reduce the area of "Indian Country." As a consequence, Congress withdrew from white settlement an area of land west of Missouri and Arkansas and running north from the Red River to the Platte and identified it as "Indian Territory." Its use was restricted to the colonization of eastern Indian tribes. When the Kansas and Nebraska Territories were opened to white settlement in 1854, Indian Territory was reduced to the area now occupied by the state of Oklahoma with the exception of the panhandle.[3] Finally in 1889, the creation of Oklahoma Territory reduced the Indian Territory to only the eastern half of the state.

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[2]Ibid., p. 71.

[3]Ibid., p. 72

The Five Civilized Tribes

The most famous and important of all Oklahoma Indians are the Five Civilized Tribes. This group of tribes was native to the southeastern United States and included the Cherokees, Chickasaws, Choctaws, Creeks, and the Seminoles. The application of the term "civilized" denotes the tribes' advanced and civilized nature as compared to other tribes that came in contact with the white man. All of the five tribes had advanced religious, social, and political foundations. The best examples of this advancement are the Cherokee alphabet invented by Sequoyah, the mission schools which prepared many Indians for college-equivalent work, and the early existence of written constitutions.[4] In addition, some of the mixed-blood Cherokees had an extremely advanced economic life based on plantations and slave labor that generated great personal fortunes.[5]

Perhaps the most important characteristic of all five tribes, however, was that by the time they arrived in Oklahoma they had been in contact with the white man for many years. Intermarriage among the Indians and whites resulted in many less-than-full-blooded Indians, who, with their contact with both worlds, gradually began to assimilate the Five Civilized Tribes into the advancing white civilization.

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[4]Ibid., pp. 110-111. See also Edwin C. McReynolds, Oklahoma, A History of the Sooner State (Norman, Oklahoma: The University of Oklahoma Press, 1954), pp. 85-108.

[5]Gibson, p. 75.

The full-bloods, however, repulsed this assimilation and continued to follow the traditional ways. This resulted in bifurcations of each of the five tribes that lasted throughout the nineteenth century.

The first of the Five Civilized Tribes to move to "Indian Country" was a group of about 6,000 Cherokees that signed a treaty in 1817 and voluntarily settled in western Arkansas. This represented only about one-third of the tribe, because the majority refused to move from east of the Mississippi River.[6] In 1828, these western Cherokees signed a new treaty and moved to northeastern Oklahoma which remained their home until the allotment of tribal land preceding statehood in 1907.

The first of the Five Civilized Tribes to move to Oklahoma were the Choctaws. In 1820, they signed a treaty of voluntary removal and received a land grant in southern Oklahoma. Only about one-fourth of the tribe moved; the remainder chose to remain in Mississippi.[7]

In addition to the Cherokees and the Choctaws, some of the Creeks also voluntarily moved to Oklahoma before 1830. The area given them was between the Arkansas and Canadian Rivers in the eastern portion of the state. As was the case with the other two tribes, only a portion of the tribe actually moved.

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[6]McReynolds, p. 117.

[7]Gibson, pp. 81-85.

By 1830, therefore, three of the Five Civilized Tribes had been assigned to "Indian Country." Most significant, however, was the fact that only a relatively small portion of each had chosen to move. This, combined with the election of Andrew Jackson in 1828, spelled disaster for the Five Civilized Tribes.

Jackson had spent his life on the Tennessee frontier and held the typical frontiersman's attitude that the Indian was a barrier to white settlement. He therefore set out to move all eastern Indians to the newly designated Indian Territory.[8] This endeavor by Jackson was soon to be called the Trail of Tears.

Between 1830 and about 1840, the rest of the Five Civilized Tribes were moved to Indian Territory. The remainder of the Cherokees and Creeks were driven from their ancestral homes to their preassigned lands in Indian Territory. The Choctaws ceded all of their lands to the government, but were fortunate enough to secure the right of an individual to remain in Mississippi and receive a small land allotment instead of moving to Indian Territory. About 4,500 Choctaws chose to remain, and today about 2,500 of them still live in Mississippi.[9] The entire Chickasaw nation was moved to an area on the Red River west of the Choctaws. The Seminoles that the government could catch in Florida were assigned to

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[8]Ibid., p. 91.

[9]Ibid., p. 103.

an area west of the Creeks. So fierce was Seminole resistance, however, that the government finally conceded and allowed a community to remain in Florida. For those less fortunate than these Seminoles, the removal was unbelievably cruel, and hundreds of Indians lost their lives.[10] Moreover, entire fortunes in land and improvements were lost by the wealthy mixed-bloods.

By 1840, all of the Five Civilized Tribes except for the few remaining Choctaws and Seminoles had been removed to Indian Territory. The geographic configuration of Indian Territory remained unchanged until after the Civil War. This configuration is shown in Figure 2-1.

The period from 1840 until the Civil War has been termed the "Golden Years" for Oklahoma Indians. During this period the Five Civilized Tribes were generally left alone by the land hungry settler and allowed to tame their new home. In so doing, they made remarkable progress.

Almost all the tribes made significant achievements in bringing law and order to Indian Territory. Beginning in 1834, all the tribes except the Seminoles wrote tribal constitutions, each of which included a bill of rights and provided for bicameral legislatures and a system of courts. So great was the respect and enforcement of the Choctaw consti-

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[10] An example of the concern of the army in moving the Indians is demonstrated by the following account: "One group of 300 Creeks were taken down the Alabama River to the Gulf, transported to the Mississippi, then placed on a river boat which had been condemned as unsafe. Upriver the rotting craft sank, with all passengers lost." Gibson, p. 107.

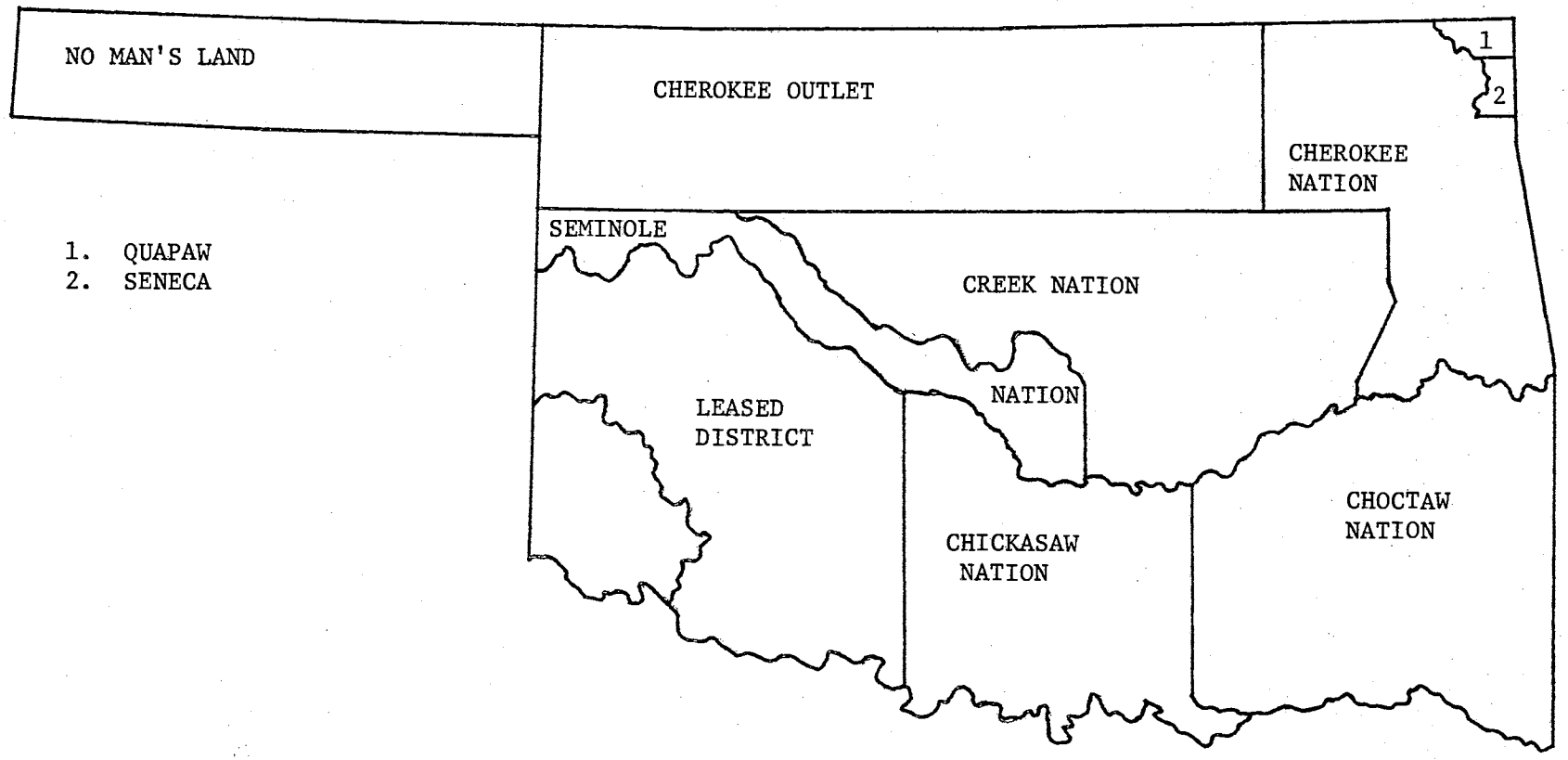

Figure 2-1. Indian Territory in 1861

tution that life and property were safer in this Nation than in the surrounding states. Moreover, there were no jails in the Choctaw Nation for "it was a matter of honor on the part of the accused Choctaw to appear for his trial and to suffer the punishment that was meted out to him . . ."[11] Often this punishment was death.

The educational opportunites offered by the school systems of the Five Civilized Tribes exceeded anything available in the adjacent states and territories. "In most of the Nations, it was possible for every child to attend school from kindergarten through the academy level (the equivalent of high school) and in some cases the first two years of college."[12] This extensive school system prepared many of the men who later were to lead the Indian into the twentieth century.

The Five Civilized Tribes made great economic advances in addition to their political and educational advances. As was the case before removal, the mixed-bloods were the most business-minded of the Indians, and many developed extensive farms, ranches, and plantations throughout the eastern half of the state. The most extensive of these plantations were operated by Choctaw and Chickasaw mixed-bloods in the Red River Valley. One of the wealthiest men in the American West was a mixed-blood Choctaw planter named Robert M. Jones

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[11] Ibid., p. 126.

[12] Ibid., p. 141.

who owned 500 slaves, developed five Red River plantations, and owned a fleet of river steamers which operated between Kiamichi Landing and New Orleans.[13]

The primary products of Indian Territory were furs, meat, farm produce, hides, grain, salt, lead, and cotton. These products were sold or traded in three different markets. The first market consisted of the military posts in the Territory such as Fort Gibson, Fort Smith, and Fort Towson. The second market was found in the numerous small towns of the Territory such as Boggy Depot, Doaksville, and Eagletown. By far the largest of the markets, however, were on the Gulf Coast. These were reached via the extensive water network in the eastern half of the state. The largest of these Gulf markets was New Orleans.[14]

The Five Civilized Tribes, therefore, made great progress during the "Golden Years." The overriding emphasis of the mixed-bloods was to adopt the ways of the white man and to become a part of his culture. The full-bloods, on the other hand, desired to remain separated from the white man and lived by themselves holding to traditional dress and customs.

The Civil War and Reconstruction

The Civil War is very important in the history of the

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[13]Ibid., p. 170.

[14]Ibid., pp. 169-171.

Oklahoma Indian. While it originally affected only the Five Civilized Tribes, its impact was felt on more than sixty other different tribes. The significance and consequences of the Civil War grows from the fact that the Five Civilized Tribes joined the Confederacy.[15]

That the Five Civilized Tribes joined the Confederacy is a paradox that needs explanation. The leading states in the Confederacy, Georgia, Alabama, and Mississippi, had been the states that had helped punish the tribes during the Trail of Tears. One historian explained this paradox with the following arguments:[16]

1. The United Stated Government, and particularly Andrew Jackson, had formally shared the blame for the Trail of Tears.

2. The federal government had been lax in making annuity payments on lands east of the Mississippi and on general treaty obligations.

3. In 1861, the federal government ordered the abandonment of all Indian Territory posts which created anxiety among the tribes.

4. The Southern influence in the Indian Territory was extremely strong. The mixed-bloods had attempted to copy the elegance of the ante-bellum South complete with slave labor. The primary markets of the Territory were all Southern. The tribal annuity funds were invested in Southern ventures. The Indian agents assigned to the Indian Territory were all Southern men. Finally, many of the most influential Indian leaders had blood ties with the South.

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[15]While the tribes officially joined the Confederacy, there were factions of each tribe that refused to honor the treaties and were neutral or even fought for the Union against their tribal brothers. Generally speaking, it was the full-bloods who chose not to honor the southern treaties. Ibid., pp. 197-210

[16]Ibid., pp. 193-194.

The loss of the Civil War by the South had great consequences in Indian Territory. Each of the Five Civilized Tribes was forced to negotiate a Reconstruction Treaty with the federal government.[17] In addition to abolishing slavery, each tribe agreed to railroad right-of-way grants across its lands and subscribed to the development of a unified government in the Indian Territory. Perhaps the most grating of the provisions, however, were those providing for the cession of tribal lands.

The cession of tribal lands was an obvious attempt by the Reconstruction government to make the Five Civilized Tribes suffer for their alliance with the South. Even though they were paid for their land, the prices were far below the prevailing minimum price of $1.25 per acre. The specific land cessions were the following:[18]

1. The Seminoles surrendered their entire domain of 2,170,000 acres to the United States for 15¢ per acre and purchased a new nation of 200,000 acres on the western border of the reduced Creek Nation for 50¢ per acre.

2. The federal government appropriated 3,250,000 acres of the western half of the Creek Nation and paid 30¢ per acre.

3. The Choctaw-Chickasaw treaty provided for the cession of the Leased District (see page 19) for $300,000.

4. The Cherokees ceded the Neutral Lands (a result of surveying error), situated in southeastern Kansas and the entire Cherokee Strip.

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[17]The Choctaws and Chickasaws finally signed a combined treaty so there were only four treaties for the five tribes. Ibid., p. 213.

[18]Ibid., pp. 213-214.

> The only income was the proceeds from the auction of the Neutral Lands.

From 1865 until 1889, Oklahoma became a dumping ground for Indians as the federal government used the lands taken from the Five Civilized Tribes to colonize tribes from every section of the country. Among the major tribes moved during this "Second Trail of Tears" were the Kiowas and Comanches (1866), the Cheyenne and Arapahoes (1869), the Osages (1870), the Kaws (1873), the Sac & Fox (1867), the Potawatomi and Shawnees (1867), the Iowas (1876), the Kickapoos (1874), the Ponca (1877), the Pawnees (1873), the Tonkawas (1884), and the Delaware (1867). The geographic configuration of Oklahoma after this immense movement is shown in Figure 2-2.

The result of this colonization was a period of drastic social, economic, and political change. Many of the tribes moved to Oklahoma were plains Indians who were less advanced than the Five Civilized Tribes and weakened the cultural and social advances made during the "Golden Years." The political advances, for example, were forgotten as internal tribal dissension over the split loyalities of the Civil War caused bloodshed and alienation among tribes. The law and order of the "Golden Years" also evaporated as Indian Territory became "The Robbers' Roost" and attracted outlaws and the guerrilla bands remaining after the Civil War.

The Five Civilized Tribes gradually began to recover from the effects of Reconstruction. The most important development in this respect was the growth of intertribal activity for mutual benefit. The Reconstruction Treaties obli-

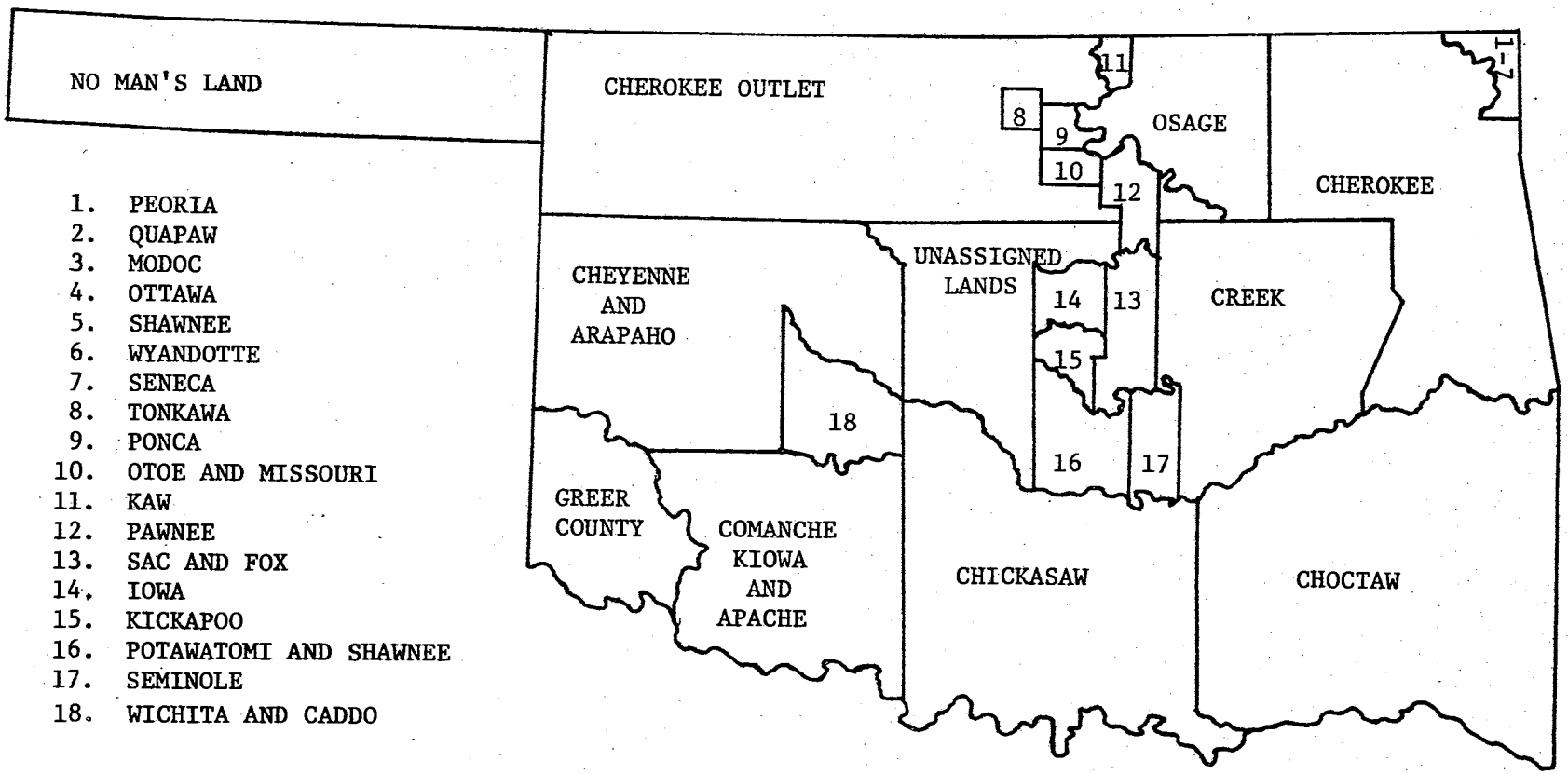

Figure 2-2. Oklahoma After 1866

gated each tribe to work for an eventual united territory with a single government. To this end, the Creeks started sponsoring the Annual Intertribal Council at Okmulgee which provided valuable political experience and cooperation among the tribes. The degree of cooperation is shown by the drafting of the famous Okmulgee Constitution of 1870 which proposed a unified Indian territory and future Indian state. Although well written, Congress refused to adopt it. The political experience, however, was not lost.

A second important development of the Reconstruction era was the gradual migration of white settlers and their families to the expanded Indian Territory. This migration was prompted in most cases by the economic attractiveness of Indian Territory. In the western part of the Territory the major attraction was cattle ranching. The general arrangement was for white cattlemen to lease grazing land from the Indians. Because of this single use, the migration and settlement in western Indian Territory was probably small.

The most rapid migration of settlers was to the eastern part of the Territory occupied by the Five Civilized Tribes. The more varied economic base of the region as compared to the West probably played a major role in this respect. Such immigration needs explanation in light of the federal law that made it a criminal offense to enter an Indian reservation without proper authority. Entrance was gained through a series of arrangements made with the Indians, two of the most common of which were intermarriage with Indians and the

permit system.

Intermarriage among white settlers and Indians was widespread and undoubtedly hastened the economic development of the Territory. Moreover, once a man obtained an Indian bride, he could import white or Negro families as tenants on his land. One such man imported one hundred white families as tenants on his Washita valley farm.[19] In addition to the economic advantage, intermarriage was extremely important in overcoming discrimination by both the Indian and the white. Because intermarriage was more dominant in the eastern part of the state, the western tribes did not generally experience this beneficial white-Indian relationship.

The permit system, the second arrangement allowing entrance to the eastern Indian land, was actually a creation of the tribal governments themselves. To promote economic development, these governments adopted permit laws which allowed white mechanics, laborers, and skilled personnel and their families to settle in each respective nation. Many laborers entered under permits to work the eastern Oklahoma coal fields while others entered as lawyers, bankers, and railroad promoters.[20]

In summary, the Civil War and Reconstruction periods in Oklahoma witnessed the fragmentation of the original Indian lands and the introduction of many different Indian tribes. The result was a marked decline in the many advances made

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[19] Ibid., p. 285.

[20] Ibid., p. 285.

during the "Golden Years." By the end of the period, however, a few favorable signs were evident in the attempts at intertribal political cooperation and the immigration of white settlers, especially to the eastern region. This latter development continued the long relationship between the Five Civilized Tribes and the white man.

Statehood

From about 1870 onward there was constant pressure to open the Indian Territory for white homesteaders. Most of the Indians and cattlemen opposed such an opening for selfish reasons; the Indians wanted an Indian state while the cattlemen did not want to lose their grazing lands. In the end both lost.

The first organized pressure for opening the Territory came from the Boomers. These were would-be homesteaders who camped on the northern and southern borders of the Territory and made daring raids into the state only to be evicted by federal troops. These groups were high organized and even published a newspaper called the Oklahoma War Chief.[21]

Finally, as a result of the agitation, Congress decided to start opening the western Indian Territory lands. In the Indian Appropriation Bill of March 3, 1889, the so-called Unassigned Lands were opened in the famous land run of 1889.[22]

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[21]Ibid., p. 291.

[22]Ibid., pp. 293-294.

Other such western land runs were made in 1891, 1892, 1893, and 1895. Beginning in 1901, land lotteries were used rather than runs.[23] As a result of opening vast amounts of western land, Oklahoma Territory was established by the early settlers in 1889.

Before any western land could be opened, however, arrangements had to be made with each tribe whose reservation was opened; this was handled by the Jerome Commission. "The common pattern of negotiation was to obtain an agreement with the leaders of each tribe which provided for the assignment of a 160 acre allotment in severalty to each man, woman, and child whose name appeared on the tribal role."[24] The remainder was surplus land and was opened to the homesteader in the land run or lottery.

Thus, after 1889, there were two territories in Oklahoma, each with its separate government. Congress, however, knew that eventually one state would emerge, and it very early began to reduce the powers of the Five Civilized tribal governments to prepare the way for statehood. As in the case of the western tribes, the transition to private land ownership would have to preceed statehood. On March 3, 1893, Congress approved the appointment of the Dawes Commission to handle this problem.

The Commission met great resistance to allotment of tribal land among all of the Five Civilized Tribes. While

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[23]Ibid., pp. 303-304.

[24]Ibid., p. 299.

willing to accept the white man's way in so many respects, these tribes had never believed in nor wanted private land ownership. Finally, after much trouble, the negotiators obtained an agreement with the Choctaws and Chickasaws which paved the way for allotment agreements with the other tribes. While the agreements all stated that tribal governments would cease in 1906, the size of the allotments varied among the tribes. The Choctaws and Chickasaws received about 320 acres each, the Cherokees 110 acres, the Creeks about 160 acres, and the Seminoles 120 acres.

Throughout the allotment period, Indian leaders were fighting the attachment of Indian Territory to Oklahoma Territory as a single state. All of the past political experience proved invaluable to the Indians in this endeavor. In the final analysis, however, their work proved to no avail as the desire for Oklahoma statehood was too strong among Congressmen. In 1906, Congress passed the Enabling Act and statehood followed in 1907.

At the time of statehood, Oklahoma had progressed far beyond its original conception as a land for the Indian. Within the domain of the Five Civilized Tribes, the eastern half of the state, the ratio of white to Indian was seven-to-one--an excellent indication of the degree of white immigration to the Territories.[25] From statehood onward the Indian lost dominance in terms of politics and economics.

Oklahoma is the only state of the Union whose Indian

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[25]Ibid., p. 285.

reservation land was completely alloted and settled before the end of national Indian allotments in 1934.[26] This does not, however, mean that the Indians received all of the land. Since the very earliest contact with the white man, the Indians had gradually been losing their land through intermarriage, lease agreements, and purchase at prices far below actual worth. The extent of this land loss is very apparent when it is noted that out of the original thirty million acres of land owned by Oklahoma Indians, they own less than three million today.[27]

Summary

The purpose of this portion of the chapter has been to place the Oklahoma Indian in historical context prior to the coming of statehood in 1907. It has been observed that the Oklahoma Indian actually refers to many different tribes located throughout the state. Generally, however, these can be divided into the original Five Civilized Tribes that came about 1830, and the less advanced tribes that were moved after the Civil War.

There are a few broad movements running throughout this history that should be emphasized. The most important is the

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[26]From an Oklahoma map it appears that Osage County is still an Osage Indian Reservation. This is in name only as much of the land is owned privately and relatively few Indians now live there.

[27]Muriel H. Wright, A Guide to the Indian Tribes of Oklahoma (Norman, Oklahoma: The University of Oklahoma Press, 1951, p. 21.

long contact that the mixed-bloods of the Five Civilized Tribes had with the white man. This contact originated in their native homes and then expanded as a result of intermarriage after removal to Indian Territory. There continued to exist, however, a wide gap between these mixed-bloods and the full-bloods who rejected the white man and chose instead to retain the traditional ways. This gap narrowed as the number of mixed-bloods increased but was never completely removed.

A second broad movement parallels a national movement occuring during the same period--the constant worsening of the Indian's relative place in society. The Five Civilized Tribes were mistreated by the federal government and finally lost their land, influence, and social leadership. The tribes that came during the post-Civil War period had already been weakened by years of constant war and difficult relations with the government. The allotment of their land in Indian Territory was the last step in isolating them from their former culture.

At the time of statehood, the Oklahoma Indian was left with very little land and completely adrift in a world he only partially understood. He was, however, fortunate in not being tied to a reservation.

The Twentieth Century

The twentieth century history of the Oklahoma Indian is less colorful and variegated than that of the nineteenth cen-

tury for several reasons. First, as was mentioned earlier, statehood officially marked the end of the Indian's dominance in the state; thus, Oklahoma history after 1907 is a history created by the white man. Secondly, there was a general feeling by the white man after statehood that the Indian was inferior and everything Indian was suppressed and scorned.[28] The result was that Indian racial pride suffered and much of the tribal heritage of centuries such as Indian crafts and dances was lost or even outlawed by the white man.

The recorded history that does exist is a product of historians and other scholars working since about 1930 when white attitudes toward the Indian began to change and real attempts were begun to save the remnants of his culture. Indian arts and crafts were promoted by the state government and there was renewed interest by the white population in Indian dances and tribal gatherings. This trend has continued and has been intensifying almost every year since 1930.

The best way to represent the condition of the modern Oklahoma Indian is by citing some important economic and social characteristics. In order to clarify the statistical analysis, this portion of the chapter is divided into three categories; population characteristics, personal characteristics, and economic characteristics. To determine the relative position of the Oklahoma Indian, comparisons will be made with the white population of the United States, the non-

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[28]Ibid., p. 23.

white population of Oklahoma, and the Indian populations of the United States, Arizona, and New Mexico. These states were chosen for comparison for two reasons: (1) whereas Oklahoma ranks second, Arizona ranks first and New Mexico third in terms of Indian population; (2) Indians in both other states are largely concentrated in reservations.

Population

There are several disparate estimates of the number of Indians currently residing in the United States.[29] The reasons for differences in these estimates are a product of two problems: (1) the problem of what constitutes an Indian and (2) problems of ennumeration.

By far the major problem involved in determination of Indian population is to agree on exactly what blood quantum constitutes an Indian. Any determination must necessarily be arbitrary. Some near full-bloods have been completely absorbed into the white population and, in their own eyes, are more white than Indian. On the other hand, some low-blood Indians still live as did their Indian ancestors and should be termed as Indians. For statistical purposes, the definition that the United States Census Bureau uses will be accepted in this study. In addition to full-bloods, persons of mixed-blood are included as Indian if they are enrolled on an Indian tribal or agency roll or if they are regarded as

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[29]Several are included in William A. Brophy and Sophie D. Aberle, Compilers, The Indian, America's Unfinished Business (Norman, Oklahoma: The University of Oklahoma Press, 1966), pp. 215-217. A much larger estimate is found in Wright.

Indians in their community. The commonly accepted requirement is one-fourth Indian blood.[30]

The second problem encountered in determination of Indian population comes in ennumeration. There are many problems in this respect: splinter groups of Indians escape count; migratory Indian workers may cause the populations of reservations to shrink or expand with the season; and in the Southwest, many Indians are born outside hospitals or live in virtual isolation.[31] These problems make ennumeration difficult.

Some of the population data gathered by the United States Bureau of the Census appear in Table 2-1. This table shows the Indian population of the United States and of the leading Indian states in 1960. As the table indicates, Oklahoma has an Indian population of 62,871 which is second only to the 83,238 Indians of Arizona. The 546,228 Indians of the United States represent only 0.3 per cent of the total population of the country, but are concentrated in a very few states.

The 1960 Oklahoma Indian population size showed little change from that in 1890; however, there have been considerable changes from decade to decade (Table 2-2). The peak was reached in 1930 when 92,725 Indians resided in the state, and the low of 53,769 was reached in 1950. Since 1950, how-

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[30]U. S., Department of Commerce, Bureau of the Census, U. S. Census of the Population: 1960, Subject Reports, Nonwhite Population by Race, Final Report PC(2)-1C, p. X.

[31]Brophy and Aberle, p. 11.

TABLE 2-1

AMERICAN INDIAN POPULATION OF THE UNITED STATES AND SELECTED STATES IN 1960

Area	Number	Per Cent
United States	546,228	100.0
Urban	165,922	--
Rural farm	78,089	--
Rural nonfarm	302,217	--
Arizona	83,238	15.2
California	40,853	7.5
Minnesota	15,793	2.9
Montana	21,411	3.9
New Mexico	56,356	10.3
New York	21,006	3.8
North Carolina	38,734	7.1
Oklahoma	62,871	11.5
Urban	23,257	37.0
Rural farm	7,103	11.3
Rural nonfarm	32,511	51.7
South Dakota	25.794	4.7
Washington	21,252	3.9
Other states	158,920	29.2

Source: U. S. Bureau of the Census, U. S. Census of Population: 1960, Subject Reports, Nonwhite Population by Race, Final Report PC (2) - 1C.

ever, the Indian population of the state has been increasing.

TABLE 2-2

AMERICAN INDIAN POPULATION OF OKLAHOMA, 1890-1960

Year	Population
1890	64,456
1900	64,445
1910	74,825
1920	57,337
1930	92,725
1940	63,125
1950	53,769
1960	62,871

Source: U. S. Bureau of the Census, U. S. Census of Population: 1960, General Population Characteristics, Oklahoma, Final Report PC(1)-38B.

Historically, of course, the Indian has been predominantly rural rather than urban oriented. The twentieth century has not altered this, as 70 per cent of the nation's Indians were residing in rural areas in 1960. In the same year, 63 per cent of Oklahoma's Indians were classified as rural and 51.7 per cent were rural nonfarm. This rural nonfarm orientation is very important because it could indicate an isolation from much of the progress of the twentieth century as measured by urban or rural farm orientation.

The county distribution of Oklahoma's Indian population

in 1960 is shown in Table 2-3. A graphic presentation of the per cent distribution by county is shown in Figure 2-3. In terms of absolute numbers, Oklahoma, Tulsa, Cherokee, Caddo, and Adair counties had the largest Indian populations in 1960. On a percentage basis, Adair County led followed by Cherokee, Delaware, Caddo, and McIntosh counties. The majority of Oklahoma's Indians were, therefore, found in the eastern half of the state in 1960.

It was indicated previously that only 37 per cent of Oklahoma's 1960 Indian population resided in urban areas. The most important absolute concentrations of urban Indian population were found in Oklahoma City (4,355 Indians), Tulsa (3,325), Muskogee (1,151), and Lawton (1,019). The largest per cent concentrations were in Okmulgee (4.1 per cent), Seminole (3.6), Shawnee (3.4), and Sapulpa (3.3). Even the urban Oklahoma Indians were concentrated in the eastern part of the state in 1960.

Personal Characteristics

There are many personal characteristics which could be examined. Those of particular interest, however, are (1) tribal affiliation, (2) the age distribution of the population, and (3) school years completed. Each of these will be examined in order.

It is difficult to determine an Indian's tribal affiliation because Indians of different tribes often intermarry and their children are of mixed tribal heritage. This fact will be demonstrated in the subsequent discussion of tribal

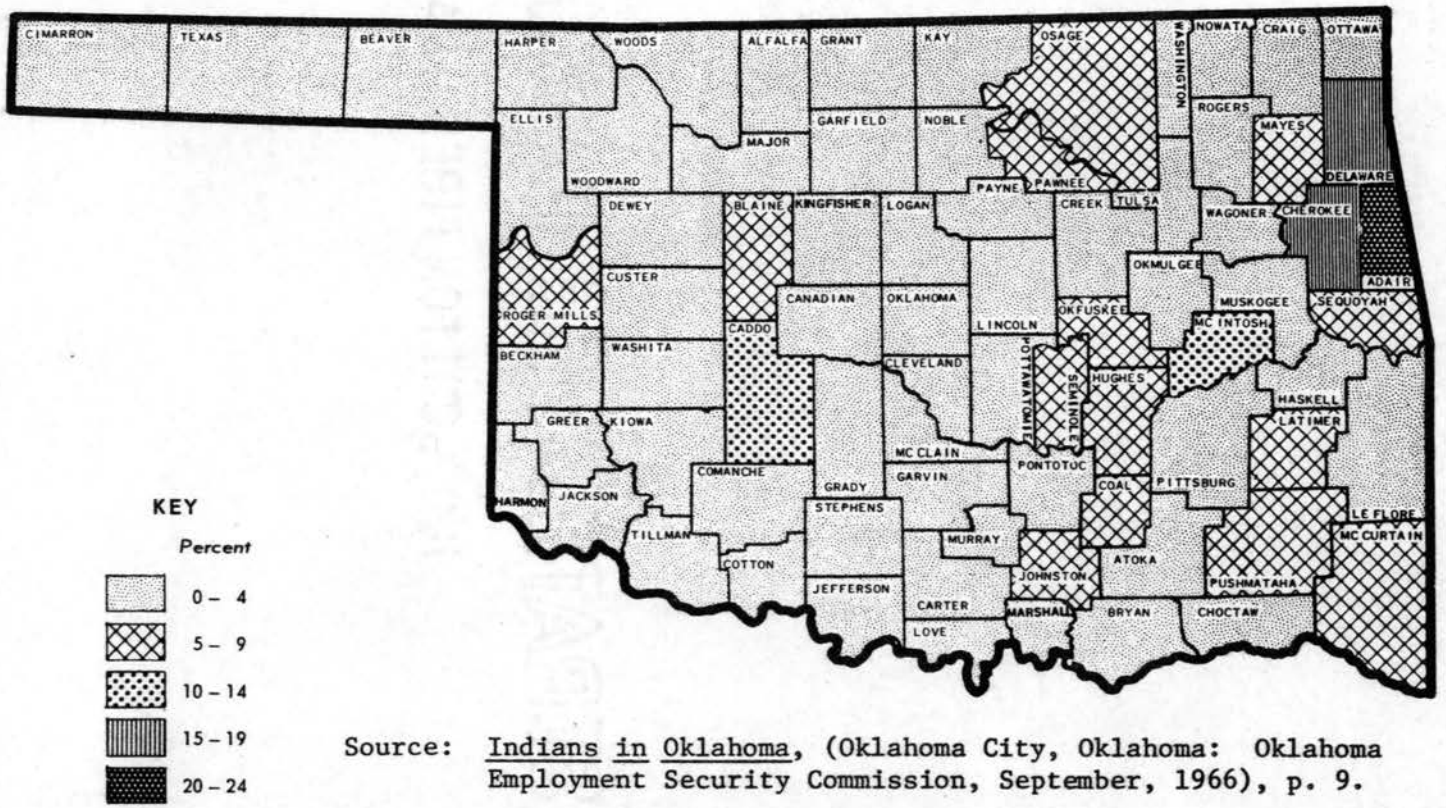
TABLE 2-3

AMERICAN INDIAN POPULATION OF OKLAHOMA BY COUNTY IN 1960

County	Indians	Per cent of County Total	County	Indians	Per cent of County Total
Adair	3,055	23.3	LeFlore	943	3.3
Alfalfa	7	0.1	Lincoln	184	1.0
Atoka	479	4.6	Logan	29	0.2
Beaver	6	0.1	Love	71	1.2
Beckham	39	0.2	McClain	81	0.6
Blaine	949	7.9	McCurtain	2,019	7.8
Bryan	563	2.3	McIntosh	1,241	10.0
Caddo	3,098	10.8	Major	10	0.1
Canadian	655	2.7	Marshall	272	3.7
Carter	743	1.9	Mayes	1,682	8.4
Cherokee	3,159	17.8	Murray	287	2.7
Choctaw	753	4.8	Muskogee	1,901	3.1
Cimarron	4	0.1	Noble	426	4.1
Cleveland	510	1.1	Nowata	148	1.4
Coal	314	5.7	Okfuskee	1,067	9.1
Comanche	2,522	2.8	Oklahoma	5,288	1.2
Cotton	375	4.7	Okmulgee	1,603	4.3
Craig	600	3.7	Osage	1,723	5.3
Creek	1,137	2.8	Ottawa	1,204	4.3
Custer	764	3.7	Pawnee	565	5.2
Delaware	2,093	15.9	Payne	310	0.7
Dewey	246	4.1[a]	Pittsburg	1,078	3.1
Ellis	2	---	Pontotoc	972	3.5
Garfield	230	0.4	Pottawatomie	1,742	4.2
Garvin	268	1.0	Pushmataha	573	6.3
Grady	185	0.7	Roger Mills	259	5.1
Grant	4	0.1	Rogers	797	3.8
Greer	80	0.9	Seminole	2,343	8.4
Harmon	22	0.4	Sequoyah	1,195	6.6
Harper	0	---	Stephens	201	0.5
Haskell	343	3.8	Texas	19	0.1
Hughes	1,397	9.2	Tillman	109	0.7
Jackson	126	0.4	Tulsa	4,748	1.4
Jefferson	33	0.4	Wagoner	333	2.1
Johnston	579	6.8	Washington	622	1.4
Kay	1,612	3.2	Washita	106	0.6
Kingfisher	197	1.9	Woods	7	0.1
Kiowa	683	4.6	Woodward	35	0.3
Latimer	644	8.6			

[a]Less than 0.1 per cent.

Source: U. S. Bureau of the Census, U. S. Census of Population: 1960, General Population Characteristics, Oklahoma, Final Report PC(1)-38B.



Source: Indians in Oklahoma, (Oklahoma City, Oklahoma: Oklahoma Employment Security Commission, September, 1966), p. 9.

Figure 2-3. Indians as Per Cent of County Population, Oklahoma, 1960

affiliations of the trainees. Various attempts have been made to separate Oklahoma's Indian population into tribes, the latest being that of Miss Muriel Wright.[32] In her book, A Guide to the Indian Tribes of Oklahoma, Miss Wright ennumerated sixty-seven different tribes. Her data are used in Table 2-4 which shows the population of selected Oklahoma tribes in 1950. The Five Civilized Tribes were the first and most populous tribes to come to Oklahoma, and it is not surprising to note that in 1950, they included the great majority of Oklahoma Indians. Among the Indians coming in the "Second Trail of Tears," the Kiowa, Comanche, Shawnee, and Cheyenne had the largest tribal membership.

TABLE 2-4

POPULATION OF SELECTED AMERICAN INDIAN TRIBES IN OKLAHOMA IN 1950[a]

Apache	200
Arapaho	1,189
Cherokee	47,000
Cheyenne	2,100
Chickasaw	5,350
Choctaw	19,000
Comanche	2,700
Creek	9,900
Kiowa	2,800
Kiowa-Apache	400
Pawnee	1,260
Seminole	2,070
Shawnee	2,250

[a]The total far exceeds the official census figures as Miss Wright sought to include Indians of all blood quanta.

Source: Muriel H. Wright, A Guide to the Indian Tribes of Oklahoma (Norman, Oklahoma: The University of Oklahoma Press, 1951).

[32]See footnote 27.

The age distribution of the white, nonwhite, and Indian populations of the United States, Arizona, New Mexico, and Oklahoma is shown in Table 2-5. The median age of the American Indian population in 1960 was more than eleven years below that of the white population of the country. This heavy concentration of Indians in the low age brackets is a product of two causes: (1) a birth rate which is twice that of the nation; and (2) the poor health of the Indian population as witnessed by an infant mortality rate twice that of the rest of the country and a normal life expectancy of Indians of 41.8 years as compared with 62.3 for all races.[33]

The median age of Oklahoma Indians in 1960, while very low when compared with the white population, surpassed that of the Indians of the United States, Arizona, and New Mexico. This can undoubtedly be attributed, in large part, to the better health of Oklahoma Indians as compared with the Indians of New Mexico and Arizona.[34] This better health is a result of several factors: (1) in Oklahoma there are good roads and medical facilities situated near Indian homes; (2) roads in Oklahoma are paved public roads instead of dirt reservation roads; (3) in Oklahoma language barriers are not nearly as important as on the reservations of Arizona and New Mexico; (4) in Oklahoma there is water often adjacent to

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[33]Brophy and Aberle, pp. 162-163.

[34]This better health is attested to by the fact that Oklahoma Indians most frequently suffer from obesity, diabetes, and hypertension rather than from diphtheria, thyhoid, and tuberculosis as do many of the nation's Indians. Ibid., pp. 164-165.

TABLE 2-5

PERCENTAGE AGE DISTRIBUTION OF THE WHITE, NONWHITE, AND AMERICAN INDIAN POPULATIONS OF THE UNITED STATES AND SELECTED STATES IN 1960

Years of Age	White[a]		Nonwhite[a]		American Indian[b]		
	United States	Oklahoma	Oklahoma	United States	Arizona	New Mexico	Oklahoma
Under 5 years	10.9	10.0	14.2	16.7	19.3	17.7	13.6
5 to 14 years	19.3	19.1	24.3	25.5	27.9	28.9	26.3
15 to 24 years	13.3	14.2	14.2	16.4	17.5	18.0	15.0
25 to 34 years	12.7	12.2	10.5	11.6	12.1	11.8	10.2
35 to 44 years	13.5	12.7	10.2	9.4	8.5	8.7	10.5
45 to 54 years	11.7	11.8	9.9	7.8	6.0	6.5	10.0
55 to 64 years	9.0	9.4	8.2	7.9	4.3	4.5	7.8
65 years & over	9.4	10.7	8.8	4.7	4.3	3.9	6.6
Median age	30.3	30.7	22.7	19.2	16.5	16.7	20.8

Sources: [a]U. S. Bureau of the Census, U. S. Census of Population: 1960, General Social and Economic Characteristics, U. S. Summary, Final Report PC (1)-1C.

[b]U. S. Bureau of the Census, U. S. Census of Population: 1960, Subject Reports, Nonwhite Population by Race, Final Report PC (2)-1C.

the home; and (5) housing facilities in Oklahoma, however poor, are better than on the reservations in New Mexico and Arizona.[35]

Education is a major determinant of income in the United States. The data in Table 2-6 show the percentage distribution of years of school completed by persons 25 years old and over for the white, nonwhite, and Indian populations of the United States and the previously mentioned states. The median school years completed by the white population of the United States and Oklahoma in 1960 were almost eleven years. The average Indian in the United States and Oklahoma completed only a little more than eight years of school, a three-year disadvantage when compared with the white job competitor. In both the United States and Oklahoma, less than 2 per cent of the 1960 white population did not complete the first grade; for the Indians of the nation and Oklahoma, these noncompletion rates were 10.4 per cent and 6 per cent, respectively. About 25 per cent of the white population of the United States and Oklahoma completed high school; only 14 per cent of Oklahoma Indians and 12.4 per cent of the country's Indians completed high school. These statistics clearly indicate that Indians do not obtain enough education to allow them to compete for jobs providing even an average standard of living.

While the educational attainment of Oklahoma Indians is

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[35]Ibid., pp. 164-172.

TABLE 2-6

PERCENTAGE DISTRIBUTION OF YEARS OF SCHOOL COMPLETED BY PERSONS 25 YEARS OLD AND OVER FOR THE WHITE, NONWHITE, AND AMERICAN INDIAN POPULATIONS OF THE UNITED STATES AND SELECTED STATES IN 1960

	White[a]		Nonwhite[a]		American Indian[b]		
	United States	Oklahoma	Oklahoma	United States	Arizona	New Mexico	Oklahoma
No school years completed	1.9	1.2	4.8	10.4	36.1	36.9	6.0
Elementary:							
1 to 4 years	4.8	6.4	15.2	11.5	15.0	12.9	16.2
5 to 6 years	6.7	7.5	12.7	12.1	12.5	9.3	12.2
7 years	6.1	6.8	8.1	9.1	5.7	5.0	8.2
8 years	18.1	18.1	15.3	16.2	8.9	8.8	16.3
High School:							
1 to 3 years	19.3	18.1	20.1	23.1	12.3	14.2	19.1
4 years	25.8	23.7	14.3	12.4	7.3	9.5	14.0
College:							
1 to 3 years	9.3	10.1	5.5	3.7	1.7	1.9	5.8
4 years or more	8.1	8.2	4.1	1.4	0.4	1.4	2.2
Median school years completed	10.9	10.7	8.6	8.4	4.1	4.7	8.2

Sources: [a]U. S. Bureau of the Census, U. S. Census of Population: 1960, General Social and Economic Characteristics, U. S. Summary, Final Report PC(1) - 1C.

[b]U. S. Bureau of the Census, U. S. Census of Population: 1960, Subject Reports, Nonwhite Population by Race, Final Report PC(2) - 1C.

low when compared to the white population, that of Arizona and New Mexico Indians is truly surprising to find in contemporary America. The median school completed for these Indians is about 4.4 years--a fourth grade education. More startling than this is the fact that about 37 per cent of these Indians have not completed even the first grade! It should be emphasized that these statistics are for Indians who are 25 years old and over. The situation for the younger Indians of Arizona and New Mexico is much improved as illustrated by the fact that the median school years completed for Indians between the ages of 14 and 25 is about eight years.[36]

Economic Characteristics

The economic characteristics of greatest interest to the study are those of employment and income. Table 2-7 shows the 1960 labor force summary for the white, nonwhite, and Indian populations of the United States and the previously mentioned states. The Indian unemployment rate in 1960 was almost three times as large as that of white Americans. The unemployment rate of Oklahoma Indians was 12.1 per cent which exceeded even that of the nonwhite population of the state. The Oklahoma Indian's unemployment rate was lower, however, than that of the Indians of the nation and of Arizona and New Mexico.

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[36]U. S., Department of Commerce, Bureau of the Census, U. S. Census of Population: 1960, Subject Reports, Nonwhite Population by Race, Final Report PC(2)-1C, Table 20, pp. 52-53.

TABLE 2-7

LABOR FORCE SUMMARY FOR THE WHITE, NONWHITE, AND AMERICAN INDIAN POPULATIONS OF THE UNITED STATES AND SELECTED STATES IN 1960

	White[a]		Nonwhite[a]		American Indian[b]		
	United States	Oklahoma	Oklahoma	United States	Arizona	New Mexico	Oklahoma
Population, 14 years old and over	113,122,890	1,528,545	139,765	326,289	45,694	31,471	39,216
In labor force	62,478,134	790,828	63,267	138,692	15,678	10,840	14,316
Armed forces	1,592,711	29,185	2,974	4,147	37	58	128
Civilian labor force	60,885,423	761,643	60,293	134,545	15,641	10,782	14,188
Employed	58,010,262	731,077	54,871	115,000	13,007	8,988	12,467
Unemployed	2,875,161	30,566	5,422	19,545	2,634	1,794	1,721
Rate of unemployment	4.7	4.0	9.0	14.5	16.8	16.6	12.1
Participation rate	54.6	51.7	45.3	42.5	34.2	34.3	36.3

Sources: [a]U. S. Bureau of the Census, U. S. Census of Population: 1960, General Social and Economic Characteristics, U. S. Summary, Final Report PC(1)-1C.

[b]U. S. Bureau of the Census, U. S. Census of Population: 1960, Subject Reports, Nonwhite Population by Race, Final Report PC(2)-1C.

The labor force participation rates of the white population in 1960 surpassed those of Indians. Part of the explanation for these low Indian labor force participation rates can undoubtedly be attributed to those Indians who, frustrated in not being able to find work for many months, simply stop looking and drop out of the labor force. The participation rate of Oklahoma Indians was 36.3 per cent which was lower than that of all Indians in the nation and of the Oklahoma nonwhite population.

The percentage distribution of income for males in 1959 is shown in Table 2-8. Of all white males in the nation, 24.8 per cent received less than $2,000 annual income while 34.6 per cent received less than $3,000. Of all Indian males with income in the country in 1959, 53.9 per cent were below the $2,000 income level and 67.3 per cent received less than $3,000. Oklahoma Indians were even lower on the income ladder as 59.3 per cent of the males received less than $2,000 in 1959 while 72.9 per cent were below the $3,000 level.

Summary

The purpose of this final portion of the chapter has been to discuss the condition of the Oklahoma Indian in the twentieth century. Several conclusions can be made as a result of this discussion: (1) Oklahoma Indians are much younger than white Oklahomans, tend to live in the eastern half of the state, and are rurally oriented; (2) Oklahoma Indians are insufficiently prepared to economically compete with white Oklahomans because of low educational attainment;

TABLE 2-8

PERCENTAGE DISTRIBUTION OF INCOME RECEIVED BY ALL MALES WITH INCOME FOR THE WHITE, NONWHITE, AND AMERICAN INDIAN POPULATIONS OF THE UNITED STATES AND SELECTED STATES IN 1959

Income	White[b]		Nonwhite[a]		American Indian[b]		
	United States	Oklahoma	Oklahoma	United States	Arizona	New Mexico	Oklahoma
All males with income	100.0	100.0	100.0	100.0	100.0	100.0	100.0
$1 to $999 or loss	13.5	18.2	36.2	34.9	44.0	36.9	39.3
$1,000 - $1,999	11.3	14.3	20.8	19.0	16.7	18.7	20.0
2,000 - 2,999	9.8	11.6	16.2	13.4	12.5	13.9	13.6
3,000 - 3,999	11.0	12.0	11.5	10.6	10.7	11.6	9.9
4,000 - 4,999	12.8	11.7	8.5	9.2	7.9	9.0	7.1
5,000 - 5,999	13.2	11.0	3.8	6.1	4.6	5.5	4.9
6,000 - 6,999	9.3	7.4	1.4	3.1	2.0	2.7	2.6
7,000 - 7,999				1.4	0.6	0.6	1.1
8,000 - 8,999	11.8	8.2	1.1	0.7	0.4	0.4	0.4
9,000 - 9,999				0.7	0.3	0.3	0.4
$10,000 and over	7.3	5.6	0.5	0.9	0.3	0.4	0.7

Sources: [a]U. S. Bureau of the Census, U. S. Census of Population: 1960, General Social and Economic Characteristics, U. S. Summary, Final Report PC(1) - 1C.

[b]U. S. Bureau of the Census, U. S. Census of Population: 1960, Subject Reports, Nonwhite Population by Race, Final Report PC(2) - 1C.

and (3) Oklahoma Indians, while generally better off than their counterparts in Arizona and New Mexico, experience high unemployment rates and very low income levels.

CHAPTER III

THE ORIGIN, ADMINISTRATION, AND USE OF PUBLIC LAW 959

The purpose of this chapter is threefold: first, to trace the historical development of P. L. 959, noting previous Indian manpower policies; second, to discuss the administration of P. L. 959 by the Bureau of Indian Affairs; and finally, to discuss the extent of national use of P. L. 959 since 1958.

The Historical Development of Public Law 959

The United States government has long been interested in the education of the Indian. As early as 1794, in a treaty with the Oneida Indians, the government agreed to support financially the education of tribal members.[1] Other treaties contained similar provisions, but because treaties were usually not honored by the government, little progress was made in Indian education during the early years after Independence.

The first significant attempt at Indian education came with the Congressional act of March 3, 1819. This act pro-

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[1]George Dewey Harmon, Sixty Years of Indian Affairs (Chapel Hill: The University of North Carolina Press, 1941), p. 157.

vided a continuing educational appropriation of $10,000 to be used for the education of Indian youth.[2] In addition to reading, writing, and arithmetic, the curriculum for the boys included instruction in agriculture and in those mechanical arts "suited to the condition of the Indians."[3] Thus, from its earliest participation in Indian education, the government has emphasized practical education as well as the provision of basic language arts and mathematical training.

The most important development in Indian vocational education came in 1876, when Congress approved an annual appropriation for the support of industrial schools. With this act of August 15, 1876, the early practical education evolved formally into a program of vocational education. Several important Indian vocational schools were established as a result of this legislation. The first was begun at Carlisle, Pennsylvania, in 1876. The educational program was structured so that an Indian youth could spend at least half the day in vocational training. Carlisle became very famous not only as a vocational school, but also for its athletic program and its most famous product, Jim Thorpe.[4] Carlisle was converted to an army barracks in 1918, and never reopened as an Indian school.

Two other important Indian vocational schools were

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[2]Lawrence F. Schmeckebier, The Office of Indian Affairs (Baltimore: The John Hopkins Press, 1927), p. 39.

[3]Harmon, p. 162.

[4]Ibid., pp. 51-52.

opened as a result of the 1876 legislation. These were Chilocco Indian School in Chilocco, Oklahoma, and Haskell Institute in Lawrence, Kansas. Both schools are still functioning today although their purpose has altered since their inception in 1884. Originally intended to provide both academic and vocational education, they now provide post-high school vocational and technical training for Indian youth. Most courses last for two years and cover a wide spectrum of programs including food services, printing, auto mechanics, and secretarial training. Because of the expense of this lengthy training, only a relatively few Indians can be supported. In 1965, for example, the enrollment of Haskell was 1,185 while Chilocco had only 1,201 students.[5]

Despite the fact that the government has long been interested in providing practical and vocational training for American Indians, it is apparent that this training has been available only to Indian youth and not to adults. Moreover, the relatively small enrollment in Indian vocational schools providing post-secondary training means that most Indian youths cannot receive advanced vocational training.

In the rapidly advancing technological world of the last several decades, high school vocational training courses are becoming increasingly less adequate to prepare graduates to find good paying and skilled jobs. Haskell graduates themselves indicate that they needed the two years of post-

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[5]U. S., Department of the Interior, Bureau of Indian Affairs, Statistics Concerning Indian Education, Fiscal Year 1965 (Lawrence, Kansas: Haskell Institute, 1966), p. 16.

high school training to be proficient in their chosen vocations.[6] Hence, one of the major problems confronting Indian vocational training for several decades has been to train adult Indians who are not prepared to compete in today's labor market.

The first documented case of adult Indians receiving vocational training in the twentieth century occurred between the years 1933 and 1942 in the Civilian Conservation Corps. During this nine-year period, more than 75,000 Indians received on-the-job training in fifty-seven different vocational skills.[7] Over 8,000 of these were certified as skilled workmen as a result of their training.

The present program of adult vocational training originated in 1948. During that year the Bureau of Indians Affairs began an experimental employment placement program with the Navajo and Hopi Indians. A placement staff worked with Indian organizations, Indian leaders, and individual Indians to stimulate interest in employment, to educate them regarding working and living conditions off the reservation, and to to assist them to use established employment agencies.[8]

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[6]Solon Gonder Ayers, "An Investigation of Terminal Vocational Education at Haskell Institute" (Unpublished Ed.D. Dissertation, University of Kansas, 1952), p. 57.

[7]U. S., Congress, House, Providing Vocational Training for Adult Indians, Report No. 2532, 84th Cong. 2nd Sess., 1956, pp. 1-2.

[8]U. S., Department of the Interior, 1951 Annual Report of the Secretary, Resources for Defense, (Washington: U. S. Government Printing Office, 1951), p. 375.

By 1951, this placement program had been introduced in the Aberdeen, South Dakota; Billings, Montana; Minneapolis, Minnesota; Muskogee, Oklahoma; and Portland, Oregon areas of the Bureau of Indian Affairs.[9] During the 1951 fiscal year more than 20,000 placements were made. The program significantly expanded in 1952 as the Gallup, New Mexico; Anadarko, Oklahoma; and Phoenix, Arizona area offices joined, and a total of 60,000 placements were made.

Fiscal year 1952 saw the introduction of the Bureau's relocation program which enables an Indian and his family to receive financial aid for resettlement to a place of employment. This service is officially designated as the Direct Employment Assistance Program, abbreviated DE, and remains an important service offered the Indian.

The most significant event of 1952, however, was the introduction of another experimental program. Bureau personnel recognized that adult Indians on reservations were unskilled, and had little industrial experience, and were thus unable to secure permanent positions even when employed through the placement program. To alleviate this situation, an experimental apprenticeship program was started in the Navajo-Hopi area to teach twenty-seven skilled trades. This was the real beginning of the adult vocational training program.

As a result of this experimental training program in

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[9]See the discussion of the organization of the Bureau of Indian Affairs in the next part of this chapter.

1954, the Bureau was given the sole responsibility of developing a program of vocational training for adult Indians. This program was begun by the initiation of contracts with a representative number of training institutions in the country. By March 1, 1955, the first few trainees and their families were relocated and began training. During the remainder of the year, 170 more applications were taken for participation in the program.

The Bureau's attempt to establish an adult vocational training program progressed no further, however, because Congress became interested and took over the initiative. On January 6, 1955, Congressman Ed Edmondson of Oklahoma introduced a bill providing for (1) vocational training for Indians, (2) employment location assistance, and (3) the promotion of self-sufficiency among American Indians.[10] The bill was referred to the House Committee on Interior and Insular Affairs but was never reported out of committee.

In the following session of Congress there was increased interest in Indian vocational training. Congressman Edmondson introduced a new bill which called only for adult vocational training of Indians instead of his more comprehensive bill of the previous session.[11] This was again referred to the House Committee on Interior and Insular Affairs, but

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[10] U. S., Congress, House, A Bill to Promote The Education and Rehabilitation of the Indians of the United States and Its Territories, H. R. 1562, 84th Cong., 1st sess., 1955.

[11] U. S., Congress, House, A Bill to Provide Vocational Training for Adult Indians, H. R. 9904, 84th Cong., 2nd sess., 1956.

this time was favorably reported out.[12]

An almost identical copy of the Edmondson bill was introduced in the Senate during the same session by the eight senators of the states of North and South Dakota, Montana, and Wyoming.[13] This bill, S. 3416, was referred to the Senate Committee on Interior and Insular Affairs and was favorably reported out of committee on July 19, 1956. Among the advantages of adult vocational training that the committee cited were (1) a higher standard of living for the Indian, (2) more availability of training than that offered by the Bureau of Indian Affairs, (3) development of a skilled labor force, and (4) a decrease in the juvenile delinquency of Indian youth on the reservations.[14]

The only real difference in the Edmondson bill and the Senate bill was that the Senate provided for adult vocational training for Indians "on or near reservations" while Edmondson added the phrase "or in areas of substantial Indian land allotments." Edmondson's purpose was to assure application of the new program to the Indians of his native Oklahoma where, it will be remembered, there are no reservations.[15]

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[12]See House Report No. 2532 previously cited.

[13]U. S., Congress, Senate, A Bill Relative to Employment for Certain Adult Indians On or Near Indian Reservations., S. 3416, 84th Cong., 2nd sess., 1956.

[14]U. S., Congress, Senate, Relative to Employment for Certain Adult Indians On or Near Reservations, Report no. 2664, 84th Cong., 2nd sess., 1956, pp. 3-4.

[15]U. S., Congress, House, Congressional Record, 84th Cong., 2nd sess., July 27, 1956, CII, Part II, p. 15188.

In a speech before the House on July 27, 1956, Congressman Edmondson stated that the Bureau of Indian Affairs had assured him that Oklahoma Indians would be included in the Senate phrase "on or near reservations."[16] He therefore urged his fellow House members to pass S. 3416 which the Senate has passed on July 23. The House passed it the same day and on August 3, 1956, President Eisenhower signed it into law. A copy of Public Law 959 appears below.[17]

Public Law 959

"AN ACT"

Relative to employment for certain adult Indians on or near Indian reservations.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that in order to help adult Indians who reside on or near Indian reservations to obtain reasonable and satisfactory employment, the Secretary of the Interior is authorized to undertake a program of vocational training that provides for vocational counseling or guidance, institutional training in any recognized vocation or trade, apprenticeship, and on-the-job training, for periods that do not exceed twenty-four months, transporation to the place of training and subsistence during the course of training. The program shall be available primarily to Indians who are not less than eighteen and not more than thirty-five years of age and who reside on or near an Indian reservation, and the program shall be conducted under such rules and regulations as the Secretary may prescribe. For the purposes of this program the Secretary is authorized to enter into contracts or agreements with any Federal, State or local governmental agency, or with any private school which has a recognized reputation in the field

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[16] Ibid., p. 15188.

[17] 70 Stat. 986, USC Sec. 309.

> of vocational education and has successfully obtained employment for its graduates in their respective field of training, or with any corporation or association which has an existing apprenticeship or on-the-job training program which is recognized by industry and labor as leading to skilled employment.
>
> Sec. 2. There is authorized to be appropriated for the purposes of this Act the sum of $3,500,000 for each fiscal year, and not to exceed $500,000 of such sum shall be available for administrative purposes.

The only point of the law which needs clarification concerns the age requirements. While the law was intended <u>primarily</u> for Indians between the ages of 18 and 35, it does not exclude those younger than 18 or older than 35. This point is emphasized because quite a few Oklahoma Indians over 35 have received the training.

P. L. 959 has been amended three times since 1956, each time to increase the allocation of funds. As of April, 1965, the annual allocation limitation for the program has been $15,000,000. In addition, provision was made for a three-year nurse's training program in 1963.

The Administration of Public Law 959

The first part of this chapter has traced the development of P. L. 959 and Indian manpower policies in general. This section will discuss the administration of the law with emphasis on the adult vocational training program. Since the Bureau of Indian Affairs is the sole administrative agency, its organization will be briefly outlined first. The organization of the Branch of Employment Assistance will be

discussed next, to be followed by a description of the selection of trainees and the administration of the AVT program.

The Bureau of Indian Affairs

On July 12, 1775, Congress created three departments of Indian affairs--the Northern, Southern, and Middle. In 1786, these areas were combined into only two areas, the Northern for all areas north of the Ohio River and the Southern for the land south of the river. Each area had a superintendent who reported to the Secretary of War. In 1824, Congress created the Bureau of Indian Affairs and, in 1832, placed the entire organization under a single Commissioner of Indian Affairs. Finally, in 1849, the Bureau was transferred from the War Department to the Department of Interior where it has remained.

Today the Bureau of Indian Affairs, or the BIA as it is more commonly called, is directed by a single Commissioner of Indian Affairs who is appointed by the President and approved by the Senate. The office of Commissioner has historically been a political football, and the longest that any person can expect to hold the job is eight years.[18] This has regrettably served to diminish the quality of service that might be offered the Indian.

The BIA is administratively divided into a central office, ten area offices, and numerous agency offices. The

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[18]William A. Bropby and Sophie D. Aberle, Compilers, The Indian, America's Unfinished Business (Norman, Oklahoma: The University of Oklahoma Press, 1966), pp. 7-8.

agency is the grass roots administrative unit and most directly serves the needs of the Indian. The purpose of the area office is to coordinate and supervise its agency offices and to formulate policy recommendations. The area offices are located in the following cities: Aberdeen, South Dakota; Anadarko, Oklahoma; Billings, Montana; Gallup, New Mexico; Juneau, Alaska; Minneapolis, Minnesota; Muskogee, Oklahoma; Phoenix, Arizona; Portland, Oregon; and Sacramento, California. The central office in Washington, D. C., houses the Commissioner who acts as a liaison to Congress through the Secretary of the Interior.

Oklahoma is the only state having two area offices, Muskogee and Anadarko. The Muskogee area office was originally intended to serve the Five Civilized Tribes, while the Anadarko office was to serve the Indians coming in the "Second Trail of Tears." Integration of Oklahoma Indian tribes over the years has served, however, to end this original area-tribe jurisdiction.

The Anadarko area has four agency offices located at Concho, Pawnee, Shawnee, and in Anadarko itself. The Muskogee area has seven agencies under its jurisdiction. These are located in Ardmore, Okmulgee, Miami, Tahlequah, Talihina, Wewoka, and in Philadelphia, Mississippi. This latter agency serves the descendants of those Choctaws who chose to remain in Mississippi in 1830.

The Branch of Employment Assistance

The organizational unit of the BIA which is directly

responsible for the administration of P. L. 959 is the Branch of Employment Assistance. When it was created in 1952, as the Branch of Placement and Relocation, its sole function was the administration of the Direct Employment Assistance Program (DE) begun that year. In 1953, the name was changed to the Branch of Relocation, then in 1962, to the present Branch of Employment Assistance. In addition to P. L. 959, the branch still administers the important DE program.

The Branch of Employment Assistance is organized in a much broader fashion than are most units of the BIA. Each of the ten national area offices has an area employment assistance officer who is responsible to the area director and whose job it is to coordinate and technically supervise all employment assistance activities in the area. In all of the areas except Anadarko, this involves (1) providing advice through the agency superintendent to the employment assistance offices located at each agency in the area's jurisdiction, (2) reviewing applications from his area for on-the-job training (OJT) and adult vocational training (AVT), (3) allocating and distributing training funds to trainees and their families who are training within the area, (4) general supervision of all training occurring within the area, and (5) reviewing some DE applications.

The duties of the Anadarko area employment assistance officer do not include the supervision of training occurring within the area and the allocation of training funds. When P. L. 959 was passed, BIA personnel decided that the Muskogee

area officer would administer the AVT training for both areas. It was felt that this administrative arrangement would be more efficient because it was anticipated that most AVT training would take place at Oklahoma State University School of Technical Training at Okmulgee which is only 50 miles from Muskogee. AVT training received through the Muskogee office includes, therefore, Indians from both the Muskogee and Anadarko areas.

Almost every agency within an area has an employment assistance office which is supervised by an agency employment assistance officer.[19] The agency officer helps the Indian make application for AVT, OJT, or DE and then either recommends or does not recommend the application. The agency officer's judgment of the AVT applicant is reviewed by the agency superintendent and by the area employment assistance officer, but is generally approved on the theory that the agency officer best knows the applicant.

In addition to the area and agency employment assistance offices, there are also seven field employment assistant offices (FEAO's) in the United States.[20] These offices are located in metropolitan cities where there are large concentrations of industry. They were established to provide help

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[19] An example of an agency which does not have an employment assistance office is the Osage agency in the Muskogee area. The Indians of this agency are served by the employment assistance office in the Miami, Oklahoma agency.

[20] There were originally 11 FEAO's but 3 have been closed and 2 others combined into a single office. See the footnotes to Table 3-4.

to rural Indians who request employment assistance services in an urban and industrialized area where jobs are readily available. The agency employment assistance officer counsels the applicant, helps him to decide upon a field of training, and identifies the FEAO where the services will be requested. If the application is approved, the applicant and his family are relocated to the chosen FEAO for training.

Administration of Adult Vocational Training

The administrative features of Indian adult vocational training are considerably different from those of the various other federal manpower programs. For that reason, special attention will be given the administration of AVT by the Branch of Employment Assistance.

The initiative to receive AVT rests largely with the individual Indian. This procedure is unlike that followed in certain of the other federal training programs which set up courses and then assign quotas of students to be filled by the administrators. The BIA does no active recruitment of trainees, and, in fact, most agencies today have long lists of Indians who are waiting to receive training. If an Indian is qualified and training funds exist, he is given training. Furthermore, because the program makes use of existing training facilities, there is no minimum course enrollment.

The exact procedure that an Indian must follow to receive the training is clearly outlined by his employment assistance office. Because this study evaluates institution-

al training received through the Muskogee area office, the specific procedure used by this office will be used as an example for all offices.

The first step in the procedure for the Indian is to go to his tribal agency and meet with the agency employment assistance officer. If this person feels the Indian is sincere and probably qualified to receive training, he urges him to fill out an application. A copy of this application appears in Appendix A and, as will be immediately noted, it is quite detailed.[21] It usually takes about two to four weeks for the applicant and the agency employment assistance officer to complete the application. This completion signifies to the BIA that the applicant is sincere in his desire for AVT.

One of the items which requires substantial time is the verification that the applicant is of at least the required one-quarter degree Indian blood. This usually necessitates tracing the family of the applicant for several generations to get proof of blood quantum. Another time-consuming part of the application is the acquisition of seven required documents, some of which must be obtained from sources other than the applicant.

The agency employment assistance officer next instructs the applicant to go to the closest state employment security office to take the General Aptitude Test Battery tests. The GATB, as they are called, are very important in the adminis-

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[21]This application is also used for the direct employment assistance program and for the OJT program.

tration of the AVT program and need complete explanation.

The GATB were originally developed by the Department of Labor to be used by all bureaus of employment security in the selection of applicants for referral to specific occupations for employment. There are twelve separate tests which are used to measure nine aptitudes. These aptitudes and the tests are as follow:[22]

Aptitude	Measuring
G	Intelligence
V	Verbal aptitude
N	Numerical aptitude
S	Spatial aptitude
P	Form perception
Q	Clerical perception
K	Motor coordination
F	Finger dexterity
M	Manual dexterity

Using these nine aptitudes, thirty-six Occupational Aptitude Patterns (OAP's) were established. Each OAP "consists of the most significant aptitudes and the critical scores on these aptitudes established as minimum scores for a group of occupations having similar aptitude requirements."[23] The occupations within each OAP are taken directly from the Dictionary of Occupational Titles. For 349 of the 753 occupations in the OAP's, "a test development study has been conducted and a significant correlation has been obtained between the occupational aptitude pattern norms and the cri-

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[22]U. S., Department of Labor, Manual for the General Aptitude Test Battery, Section II: Norms (Washington: U. S. Government Printing Office, June, 1966), p. 1.

[23]Ibid., p. 9.

terion for that occupation."[24] In other words, studies have set up minimum aptitude scores for 349 specific occupations. The remaining 404 occupations are grouped into OAP's having similar, but not tested, requirements and the entire OAP is given minimum aptitude scores.

For example, OAP-11 includes thirteen different occupations, all of which have about the same aptitude requirements. Among these are bus mechanic, meat cutter, and motor repairman. For the entire OAP, the cutting or minimum scores are a G of 95, an S of 85, and a F of 75.[25] For three of the thirteen occupations, special tests have established minimum norms. In some cases, the specific norms will differ from the OAP norms. For example, the special test on automobile mechanic, a member of OAP-11, indicated minimum G, S, and F scores of 85 each.[26] These specific occupation norms differ from the OAP-11 norms cited above.

When an Indian applicant has completed the GATB, a counselor of the state employment security office will grade the tests and complete a card showing those OAP's for which the applicant is qualified. The only persons allowed to see the card are personnel of the employment security commission and the Branch of Employment Assistance. The card, together

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[24] Ibid., p. 9.

[25] Ibid., p. 23.

[26] U. S., Department of Labor, Manual for the General Aptitude Test Battery, Section IV: Norms (Washington: U. S. Government Printing Office, May, 1966), p. 35.

with the applicant's score in each aptitude, is then forwarded to the employment assistance officer at the agency.

Using this card, the employment assistance officer counsels the applicant with regard to the specific vocational training program best suited to his aptitude and desires. Only the OAP norms are used by the employment assistance personnel in the Muskogee area and no use is made of any specific occupational norms. Because many applicants qualify using the broad OAP norms, but do not meet the norms for the specific occupation for which they are trained, a large number of applicants are trained in occupations not recommended by their GATB scores. Special attention will, therefore, be given in subsequent chapters to the GATB scores as possible determinants of success or failure of training.

Indians can receive adult vocational training in more than 400 different occupations in institutions located across the country; however, only thirty-two of these are administered through the Muskogee area office. Since this evaluation will deal with those Indians receiving training through the Muskogee office, only these thirty-two occupations will be discussed.

In Table 3-1 each of the thirty-two courses is related to the providing institution and the course length. This table emphasizes several important aspects of AVT training. First, much of the training received through the Muskogee office is provided by the Oklahoma State University School of Technical Training (Oklahoma State Tech) at Okmulgee.

TABLE 3-1

ADULT VOCATIONAL TRAINING COURSES AVAILABLE THROUGH THE MUSKOGEE AREA OFFICE BY LENGTH OF THE COURSE AND THE TYPE OF PROVIDING INSTITUTION

Course	Length (Months)	Type of Institution Providing Training[a]
Accounting or Bookkeeping	24 & 12	OST[b]
Airline Service Mechanic	16	A Private Aviation Co.
Appliance Repairman	16	OST
Auto Body	24	OST
Auto Mechanics	24	OST
Baking	16	OST
Banking & Data Processing	8	Private Business Colleges
Barber	7	Private Barber Colleges
Building Construction	24	OST
Building Maintenance	9	A Mississippi Vocational School
Business Machines Operator	7	Private Business Colleges
Commercial Art	24	OST
Cosmetology	5	Private Beauty Colleges
Culinary Arts	16	OST
Diesel Mechanics	24	OST
Drafting	24	OST
Dry Cleaning	20	OST

TABLE 3-1 (Continued)

Electronic Engineering Technician	18	OST
Furniture Upholstery	16	OST
Industrial Electrical Maintenance	24	OST
Industrial Electronics	24	OST
Letterpress Printing	20	OST
Licensed Practical Nurse	12	A School of Nursing
Lithography Printing	20	OST
Master Instrument Mechanic	14	A Private Aviation Co.
Meat Cutting	1	A Private School of Meat Cutting
Refrigeration - Air Conditioning	24	OST
Registered Nurse	36	A School of Nursing
Secretarial	10 & 16	OST & Private Business Colleges
Stenographic	12	OST & Private Business Colleges
Television Electronics	20	OST
X-Ray Technician	24	A Hospital

[a]Because of the large amount of training provided by the Oklahoma State University School of Technical Training at Okmulgee, this institution is identified by name.

[b]Oklahoma State University School of Technical Training at Okmulgee.

This institution was selected by the BIA because of its high standards and considerable success as a vocational education institution.

The second and most important aspect of the training emphasized in Table 3-1 concerns the length of the courses. While P. L. 959 authorized training for periods of twenty-four months, it does not require that all courses be of this length. At Oklahoma State Tech, however, most of the courses last either sixteen or twenty-four months. This length can be explained by two facts. First, the training curriculum for most of the courses is very complete and concerns all aspects of the vocation. Second, all students are required to take certain "training related courses" which Oklahoma State Tech has found help students make a success of their vocational training. Among these courses are English, oral communications, human relations, business principles, and business law.

When the applicant has selected his vocational training course, the application is completed and then evaluated by the agency employment assistance officer. Generally speaking, the Muskogee and Anadarko agency officers judge the application on the following criteria: (1) Does the applicant need financial assistance to go to vocational school? (2) Is the applicant qualified academically and does he possess the skills necessary to complete the training? and (3) Will the training lead to a job? In answering the latter question, the agency officers consider the willingness of the

applicant to relocate to find a job and the availability of job openings.

If the agency officer answers each of the questions in the affirmative, he recommends the applicant for training and forwards the application to the agency superintendent and the area employment assistance officer. If these persons approve the agency officer's evaluation, the applicant is scheduled to begin training in the near future. If the training is to be provided by an institution out of the Bureau of Indian Affairs area, the applicant and his family are moved to the location at the expense of the BIA. Even if the training is to occur within the area, the BIA will often help the applicant move to the specific training location.

The employment assistance personnel keep constant watch over each trainee's progress, and all grades and progress reports become part of permanent files. During the training period, the trainee and his family receive a subsistence allowance from the BIA. The allowance is not large and provides for only the bare necessities of life. The only requirement made of the trainee with regard to this money is that no large consumer good such as a car can be purchased.

The facilities of the Employment Assistance Branch are always available to the trainee should he need them. Guidance and counseling play an important part in the training but are used only at the trainees' request or when deemed necessary by employment assistance personnel. Most often

this counseling is for minor personal or school problems. If any problem continues to exist or grows in magnitude, however, the area employment assistance officer has the authority to terminate the training at any time. The only offense which usually does not warrant a second chance is a law violation such as auto theft.

Upon completion of training, the Employment Assistance Branch and the institution providing the training assist the trainee in finding a job. This often involves relocation to California, Texas, or some other state using the direct employment assistance program.

The Use of Public Law 959

The purpose of the final portion of this chapter is to discuss the extent of use of the opportunities offered by P. L. 959. As the evaluation concerns only the AVT portion of the law, emphasis will be placed on the use of this program.

While P. L. 959 was passed in August, 1956, the actual training did not begin until January, 1958. This sixteen-month period was used by the BIA to establish the needed administrative framework. Among the activities were the selection and initiation of contracts with AVT institutions, the initiation of contracts for OJT training, and personnel expansion and training.

Table 3-2 provides a statistical summary of the various activities which are administered by the Branch of Employment

Assistance. The Direct Employment Assistance Program is included to show the relative size of the adult vocational training and on-the-job training programs. Since 1952, more than 25,000 single persons or families have been relocated for direct employment assistance by the BIA. The actual number of people relocated exceeds 56,000. In terms of P. L. 959, many more Indians have been institutionally trained than by businesses. This probably reflects the difficulty involved in initiating OJT contracts which is one of the reasons for BIA emphasis on the AVT program.

TABLE 3-2

SUMMARY OF ACTIVITIES OF THE BRANCH OF EMPLOYMENT ASSISTANCE, UNITED STATES, 1952-1966

Fiscal Year	DE[a] (Units)	New Units[a] P. L. 959	
		AVT	CJT
1952	442	--	--
1953	697	--	--
1954	1,222	--	--
1955	1,500	--	--
1956	2,083	--	--
1957	2,882	--	--
1958	2,373	397	207
1959	1,655	1,141	168
1960	1,798	936	276
1961	1,822	1,226	506
1962	1,866	1,445	736
1963	1,696	1,747	476
1964	1,985	1,805	552
1965	2,015	2,719	656
1966	1,866	3,224	1,302
Total	25,902	14,640	4,879

[a] A Unit is an unattached person or a family.
Source: unpublished data, Bureau of Indian Affairs.

Table 3-3 shows a breakdown of AVT statistics by fiscal year and by status of training completion. Of the 14,640 single persons or families accepted for training, 58 per cent have completed training while only 28 per cent have discontinued. The remaining 14 per cent are still in training. The only year in which the number of new training units decreased was in 1960, a year in which there was a shortage of funds. In 1961, Congress substantially increased training funds in response to the great Indian demand for training.

TABLE 3-3

SUMMARY OF ADULT VOCATIONAL TRAINING BY STATUS OF COMPLETION AND BY FISCAL YEAR, UNITED STATES, 1958-66

Fiscal Year	Entered Training (Units)[a]	Discontinued Training (Units)[a]	Completed Training (Units)[a]	End of Year (Units)[a]
1958	397	41	9	347
1959	1,141	370	283	835
1960	936	383	664	724
1961	1,226	384	660	906
1962	1,445	356	831	1,164
1963	1,747	511	1,127	1,273
1964	1,805	473	1,389	1,216
1965	2,719	639	1,448	1,848
1966	3,224	888	2,109	2,075
Total	14,640	4,045	8,520	2,075

[a]A unit is an unattached person or a family.

Source: unpublished data, Bureau of Indian Affairs.

A statistical summary of the adult vocational training program by the office originating the trainee and by the status of training completion is presented in Table 3-4. It is interesting to note that area offices have initiated only 34 per cent of the trainees while the field employment assistance offices have initiated 66 per cent. This illustrates the need for the FEAO's and the extent of the services they have provided.

Of the area offices, Portland, Muskogee, and Aberdeen have initiated the greatest number of trainees. The completion rate among these trainees is 56 per cent, while the noncompletion rate is 31 per cent. Those still in training amount to 13 per cent.

The largest number of trainees from FEAO's have come from Los Angeles, Chicago, and Oakland. The percentage of training completion for all FEAO trainees is 60 per cent while noncompletion is 26 per cent. The remaining 14 per cent are still in training. The FEAO's, therefore, have a somewhat better record than the area offices in terms of training completion.

In summary, the Branch of Employment Assistance has provided services to more than 45,000 Indians since 1952. Occupational training has been provided to about 19,000 of these under the provisions of P. L. 959. Of this 19,000, about 14,000 have received adult vocational training. While 14,000 trainees is not a large number, it does represent a significant beginning in the attempt to cure the income and

TABLE 3-4

SUMMARY OF ADULT VOCATIONAL TRAINING BY OFFICE INITIATING TRAINEE AND BY STATUS OF COMPLETION, UNITED STATES, 1958-66

Office Initiating Application	Entered Training (Units)[a]	Discontinued Training (Units)[a]	Completed Training (Units)[a]	In Training End of Year (Units)[a]
Area				
Aberdeen	735	331	339	65
Billings	386	220	143	23
Juneau	230	57	120	53
Gallup	640	153	415	72
Minneapolis	695	220	381	94
Muskogee	824	199	494	131
Phoenix	631	193	342	96
Portland	825	192	524	109
Sub total	4,966	1,565	2,758	643
FEAO				
New York[b]	--	--	--	--
Chicago	1,730	439	1,170	121
Cincinnati[b]	18	12	6	--
Cleveland	1,009	195	751	63
Dallas	1,284	281	803	200
Denver	658	176	375	107
Los Angeles	2,223	533	1,240	450
Oakland	1,445	409	777	259
St. Louis[b]	101	49	46	6

TABLE 3-4 (Continued)

San Francisco[c]	736	269	375	92
San Jose	454	109	212	133
Sub total	9,658	2,472	5,755	1,431
Central				
Cherokee[d]	16	8	7	1
Total	14,640	4,045	8,520	2,075

[a]A Unit is an unattached person or a family.

[b]These offices are no longer in operation.

[c]The San Francisco office has been combined with the San Jose office.

[d]The Cherokee and Seminole agencies are not under the jurisdiction of an area office but are supervised directly from the Central Office in Washington. The employment assistance office for both agencies is located at the Cherokee agency in North Carolina.

Source: unpublished data, Bureau of Indian Affairs.

unemployment problems of the Indian. Whether the attempt has been successful, at least in the Muskogee area, will be examined in the following chapters.

CHAPTER IV

METHODOLOGY

There have been relatively few economic evaluations of manpower training.[1] As a result, the methodology to be used in such evaluations is still in the experimental stage. An important part of present and future manpower evaluations will, therefore, be the development of methodology.

The present chapter will discuss the methodology chosen for this economic evaluation of manpower training. Inasmuch as it was selected in light of the methodologies used in other evaluations, previous studies will be cited as reference points.

The chapter will be organized around the major methodological problems most often found in current debate. These problems concern (1) the choice of criteria for evaluation, (2) the means of evaluation, and (3) the method of data col-

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[1]Two examples of these evaluations are the following: Michael E. Borus, "The Economic Effectiveness of Retraining the Unemployed," (unpublished Ph.D. dissertation, Yale University, 1964); and Gerald G. Somers and Ernst Stromsdorfer, "Benefit-Cost Analysis of Manpower Retraining," Proceedings of the Seventeenth Annual Meeting of the Industrial Relations Research Association (New York, 1956), pp. 172-186. A more methodological discussion of the same research appears in an article by Gerald G. Somers, "Retraining: An Evaluation of Gains and Costs," Employment Policy and the Labor Market, ed. by Arthur M. Ross (Berkeley: University of California Press, 1965), pp. 271-298.

lection.[2]

Criteria for Evaluation

The first methodological decision is to select those items which will be used to measure the success or failure and the strengths and weaknesses of the training. These are the criteria of evaluation, and their final selection will be partially dictated by the academic discipline of the researcher. There were four criteria chosen for this evaluation, all of which are economic in nature. The first three criteria are dependent variables: (1) employment experience, (2) income, and (3) labor force attachment. Another variable, the receipt of public assistance, was rejected because of lack of data.

In addition to the dependent variables mentioned above, a fourth criterion of evaluation was selected. This was a benefit-cost analysis which compares the benefits received from training with the costs incurred in providing it. Because the benefit-cost ratio emphasizes costs as well as benefits, it is a very important tool of economic analysis. Each of the four criteria of evaluation will be discussed in the order in which they appear above.

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[2]This breakdown was developed from the paper by Einar Hardin and Michael E. Borus, "An Economic Evaluation of the Retraining Program in Michigan: Methodological Problems of Research," 1966 Proceedings of the Social Statistics Section of the American Statistical Association (Los Angeles, 1966), pp. 133-137.

Employment Experience

The first dependent variable is employment experience. This is measured by number of months employed as a per cent of number of months in the civilian labor force. In order to estimate the extent of use of training skills, employment rates will be computed for training-related employment in addition to total employment.

The choice of employment experience as a criterion of evaluation was based on the economics underlying the training. The primary purpose of the training is to increase the trainee's marginal revenue product by making him more skilled. If this occurs, then the demand for the trainee's labor will increase, and he will experience greater employment stability than he did prior to receipt of training. Hence, employment experience is an excellent indicator of the success or failure of the training.

Income

The second dependent variable is income, measured by average monthly earnings. To determine if trainees receive larger incomes from occupations using training-acquired skills than from those not using these skills, income will be computed for both training-related employment and for total employment.

The selection of income was based on the same economic reasoning as that for employment experience. If the training is successful and the marginal revenue product of the trainee increases, this will be registered in higher wages.

Higher wages will result in increased monthly income assuming (1) that no decrease in employment stability occurs after training, and (2) that the volume of training is not great enough to shift the market supply curve for that class of labor sufficiently far to the right to cause an offsetting fall in wage rates.

Labor Force Attachment

The third dependent variable is labor force attachment. This is measured by the number of months spent in the civilian labor force as a per cent of the total number of months in the training evaluation period. The determination of the length of the training evaluation period will be discussed later in this chapter.

The selection of labor force attachment as a variable was based on the fact, noted in Chapter II, that the labor force participation rates of Indians are far below those of whites. If manpower training is successful, then it could be argued that the labor force attachment rates of trainees might rise. These rates would increase if workers, who had previously not been at work or looking for work because the prospects for employment were so limited, entered the labor force after training.

Receipt of Public Assistance

It was originally intended that receipt of public assistance be a dependent variable that would measure economic dependence upon the government; however, the earliest attempt to collect data revealed several problems that would

result in incomplete public assistance data.[3] Because of this incomplete data, receipt of public assistance was rejected as a criterion of evaluation.

Benefit-Cost Ratios

The economic evaluations of MDTA conducted by Borus and by Somers both used employment experience and income as major dependent variables.[4] In addition, however, they also used a third criterion of evaluation, benefit-cost ratios. A benefit-cost analysis of manpower training compares the dis-

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[3]Three separate problems account for the incomplete nature of public assistance data. An Indian employee of the BIA stated that Indians make great use of commodity surplus assistance, but that very incomplete records are kept by the county welfare agencies that distribute this assistance. Moreover, the cost of this data collection, however unreliable, would be quite high, because each county office would have to be visited for data clearance and collection.

The second problem associated with public assistance data concerns the determination of the amount of general public assistance. Although the Oklahoma State Department of Public Welfare was more than willing to cooperate, their data storage system simply does not permit data collection on an individual without the public assistance number. One of the means of obtaining this number is through the Branch of Social Services of the BIA which supervises the distribution of that portion of public assistance designed specifically for Indians. If an Indian receives BIA assistance and has received general public assistance in the past, then the personnel of the Social Service branch record the public assistance number. However, if the Indian has received general public assistance but has not received the BIA assistance, then the only other means of obtaining the number is to travel to each of the county public assistance offices which would be prohibitive in terms of both time and money. Thus, the general public assistance data obtained via the BIA provided public assistance numbers would not necessarily reflect total public assistance receipt by the trainees.

The final problem involves the allocation of public assistance received by kinfolk but given in part to Indian trainees. At present there is no means by which the extent of this assistance sharing can be known.

[4]See footnote 1.

counted private and social benefits from training with the private and social costs incurred in the provision of the training. The benefit-cost technique is not, of course, new to economics for it has long been used to evaluate real investment expenditures.[5] That it would be turned to evaluation of investments in human capital is not surprising.[6]

While the benefit-cost analysis approaches a theoretical ideal, its specific application to investments in human capital always involve tricky empirical and methodological problems. Among the most difficult are those associated with (1) computation of the trainee's opportunity cost of training, (2) computation of the real opportunity cost to society of the training, and (3) determination of the rate of discount to be applied to private and social benefit and expenditure streams.[7] Despite these problems, however, the

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[5]For a review of benefit-cost analysis see R. Turvey and A. R. Prest, "Cost-Benefit Analysis: A Survey," Economic Journal, LXXV (December, 1965), pp. 683-735.

[6]Some of the earliest work in evaluating human capital investment was done by Theodore W. Schultz when he used a benefit-cost technique in determining the value of educational expenditures. Theodore W. Schultz, The Economic Value of Education (New York: Columbia University Press, 1963). See also Theodore W. Schultz, "Capital Formation by Education," Journal of Political Economy LXVII (December, 1960), pp. 571-583.

[7]It is encouraging to note that considerable attention is being given the benefit-cost technique by manpower researchers and government statisticians in an attempt to improve the reliability of the analysis. Representative of this attention is the work by Hardin and Borus and that by Jacob Mincer, "On-The-Job-Training: Cost, Returns, and Some Implications," Journal of Political Economy, LXX (October, 1962), pp. 50-79.

benefit-cost ratio remains as an important means of evaluating manpower training.

Means of Evaluation

Once the criteria for evaluation are selected, the second major methodological decision is the choice of a means of evaluation; that is, the mechanics by which success or failure will be determined. This portion of the chapter will discuss the procedures selected for the present evaluation. The selection was complicated by the fact that the initially chosen procedure using the three dependent variables had to be discarded and an alternative approach developed in its place. To clarify exposition, the initially chosen procedure will be discussed first, then the alternative approach selected for use of the dependent variables will be set forth. The final portion presents the procedure using the fourth criterion of evaluation, the benefit-cost analysis.

Initially Chosen Procedure Using Dependent Variable Criteria

The previously cited evaluations of Borus and Somers both used the control group technique as a means of evaluation. An ideal control group in manpower evaluation would consist of a group of persons possessing exactly the same characteristics as the trainees except for the receipt of training. Any significant differences in the dependent variables among the trainees and control group could then be attributed to training.

The major difficulty encountered in using control group analysis in social science research is that an ideal control group is impossible to find, given the complexity of the human being. The major problem, therefore, becomes the selection of a group having, as nearly as possible, the same characteristics as the trained group, and then attempting to statistically remove the remaining differences.

The means of evaluation initially chosen to determine the success or failure of Indian manpower training using the dependent variable criteria was a control group technique. Consultation with personnel in the Muskogee area office revealed two possible sources from which a group of Indians possessing about the same characteristics as the trainees could be selected.

The first possible source was tribal rolls. Investigation revealed, however, that no new names have been added to the rolls of the Five Civilized Tribes since the land allotments preceding statehood in 1907. Although the tribal rolls for the remaining Oklahoma Indians are up to date, these Indians represent a minority of the state's Indians. Moreover, the tribal rolls do not provide enough of the basic information about each Indian needed to select a control group. Tribal rolls could, therefore, not be used as a control group source.

The second control group source would involve the use of Direct Employment Assistance (DE) applications. Since the application for DE is the same as that used for on-the-

job-training (OJT) and Adult Vocational Training (AVT), the same characteristics would be known for both AVT and DE recipients. Further investigation of this source revealed, however, that two major problems would have been encountered in its use.

The first problem relates to the cost in both time and money of using the DE applications. Construction of a control group would necessitate the use of each DE application to find those Indians possessing the same characteristics as the AVT trainees from which a control group could be randomly chosen. Since the beginning of the DE program in 1952, more than 2,500 Indians have received DE service through the Muskogee and Anadarko areas.

Because identical research time would be required in using the DE application as in using the AVT application, an approximation of the cost of this control group source was made. Based on the experience of using AVT applications in the Muskogee office, it would have taken a minimum of seventy-four additional man-days and an additional $950 to select a control group using the 2,500 DE applications.

The second major problem encountered in using DE applications was the additional time and expense of locating and obtaining information from the control group. As in the case of AVT, no attempt is made by the BIA to keep the current addresses of DE recipients, many of whom were relocated to out-of-state jobs. Using the experience of the AVT recipients, the location of the DE recipients would take a

month. To obtain information from them would probably take an additional month.

Based on the above estimates, it was concluded that the use of DE applications as a control group source would have been prohibitive in terms of money and most especially in terms of time. This meant that the two potential sources of a control group had been discarded and an alternative means of evaluation would have to be developed.

Alternative Means of Evaluation Using Dependent Variable Criteria

The alternative means chosen was a pre-post technique in which the three dependent variable criteria of the trainees prior to training were compared with these same variables after the receipt of training. Both time periods of comparison for each trainee were set so as to be of equal length as determined by the time elapsing from the end of training until December 31, 1966. In employing this technique, an attempt was made to statistically remove all variation between the pre- and post-training levels of the dependent variables which was attributable to factors other than the receipt of training. These factors were chosen on the basis of a statistical evaluation of the characteristics of the trainees.

This pre-post technique can be justified on grounds other than the necessity flowing from the failure to establish a control group. If it is admitted that a perfect control group can never be found when dealing with human beings,

then it has already been established that statistical adjustment may be necessary to equate the control group with the trainees. Whether this statistical adjustment equates trainees and a control group or equates pre- and post-training data seems unimportant; the important point is that adjustment is needed in both techniques.

A second justification of the pre-post technique is that no assumption about differences in personality characteristics is necessary. In the control group technique, differences in the levels of the dependent variables for the trainees and the control group could be attributed to differences in personality characteristics such as incentives, cultural outlook, or the drive to succeed that existed between the two groups before training. Any differences, however, between the pre- and post-training levels of the variables can be attributed only to training and/or a change in personality characteristics which itself could be a beneficial by-product of training. While certain differences between the trainees and a control group can be statistically adjusted, it is very difficult to adjust for differences in qualitatively personality characteristics such as those mentioned above. Hence, the pre-post technique holds the subjects constant and actually makes statistical adjustment easier.[8]

A final justification of the pre-post technique is its

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[8]This point is emphasized by Somers and Stromsdorfer, p. 173.

economy. It is much less expensive to collect data on 600 persons than on 1,200 persons. A more exact approximation of this saving can be acquired from the previously mentioned cost estimates using DE applications for a control group.

Evaluation Procedure Using Benefit-Cost Ratio

The fourth criterion of evaluation is a benefit-cost analysis. This study will compute a single social benefit-cost ratio for the entire adult vocational training program rather than for each individual trainee. The method and assumptions used in calculating this ratio will be fully described in Chapter VI.

Method of Data Collection

The final methodological problem concerns the mechanics of data collection. The sources of data in the economic evaluations of Borus and Somers were interviews and mailed questionnaires, although the emphasis was definitely on interviews. This evaluation chose to use mailed questionnaires as the primary source of post-training data for reasons which will be discussed later in the chapter.

The pre-post technique selected for use in this evaluation divided the data collection procedure into three distinct operations: (1) collecting of pre-training and training data; (2) determining the present location of trainees; and (3) obtaining post-training data. Each of these will be discussed.

Pre-Training Data

The first decision to be made with regard to pre-training data involved the selection of independent variables to be examined. This selection was made on the basis of data availability and economic analysis of critical variables in manpower training. Following the selection, a data form was prepared which combined the pre- and post-training data and the training data on each trainee. A copy of this form appears in Appendix B.

All pre-training and training data came from each trainees file in the Muskogee area office.[9] The single most important document in these files is the AVT application discussed in Chapter III and reproduced in Appendix A. The collection of pre-training and training data was performed in the Muskogee area office and took about twenty days to complete. In evaluating the trainee files, those Indians who were self-financed or who had completed less than one month of training were excluded from the study. The total number of trainees to be evaluated was found to be 672, only one of which was not from the Anadarko or Muskogee area.

Determining Location

The problem of locating the trainees to obtain the post-training data was complicated by the fact that the BIA makes no attempt to keep the current addresses of the trainees. In light of this, it was decided that the most prom-

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[9]The older files are actually kept in a federal data depository in Dallas but were gratefully forwarded to Muskogee at the request of the investigator.

ising source of current addresses would be the next-of-kin of the trainee.

On the assumption that the trainee's next-of-kin had not moved since the AVT application was completed, a letter was sent to about 90 per cent of the next-of-kin requesting the current address of the trainee. This letter stated that the purpose of the study was to help the American Indian and promised confidentiality of the address. It was composed with the help of sociologists who had previously worked with Oklahoma Indians and were aware of approaches most likely to produce response. To give a more personal appeal, each letter was typed rather than duplicated, and the trainee's name was included in the body. To further increase response, a reply card for the address and a postage-paid, self-addressed envelope were included with the letter. A copy of this letter appears in Appendix C.

Several weeks after the first letter was sent, a follow-up post card was sent to non-respondents. The card emphasized the importance of the study and again requested the address. Several weeks after this, a second letter was sent which reemphasized that the trainee's address would be confidential and included a new card and return envelope on the premise that the first set may have been misplaced.

In addition to these letters, several minor location sources were also used. Since Oklahoma requires the annual licensing of barbers and beauticians, state records in these licensing bureaus were used for addresses of barber and cos-

motology trainees still working in the state. The Tulsa and Oklahoma City telephone directories were also checked against an alphabetical list of the trainees on the premise that some of the trainees might have been attracted to these urban centers.

Of the 672 trainees that had received training through the Muskogee area since 1958, 421 or 62.6 per cent were finally located, primarily through the use of the letters. This high response from the letters far exceeded expectations of BIA personnel and clearly demonstrated the interest of Indians in the training and their willingness to cooperate if approached in the right manner. Many of the address cards were returned with lengthy letters expressing interest and/or appreciation of the training opportunities given their relatives.

Post-Training Data

The final operation involved in data collection was the most important, obtaining the post-training information on as many as possible of the located trainees. The initially chosen procedure was to make primary use of mailed questionnaires. To guarantee at least a minimum amount of data in light of BIA expectation of poor response to the questionnaires, it was initially intended to use 100 random personal interviews of trainees residing in Oklahoma.

Following the excellent response to the location letters, the initially chosen procedure was altered to include only a few personal interviews. The assumption behind this

decision was that a well-constructed questionnaire and accompanying letter would provide sufficient data for the evaluation and would be far less expensive than personal interviews.

A great deal of time was spent in the construction of the questionnaire and the accompanying letter to the trainees. As in the case of the location letter, sociologists and psychologists were consulted in hope of finding the most productive approach and wording for both instruments. To help the trainee understand the questionnaire, a sample completed page of the questionnaire was prepared and included. The questionnaire was finally pretested using Indians currently enrolled in AVT training at Okmulgee, and several important changes were made as a result. To improve the physical appearance of the questionnaire, it was professionally printed rather than duplicated, and a light beige paper of high quality was used instead of white paper.[10] A copy of the questionnaire and sample page appear in Appendix D.

The letter accompanying the questionnaire was typed and a postage-paid, self-addressed envelope was included for return of the questionnaire. A copy of this letter appears in Appendix E. To further encourage the trainee, his name and the date that he ended training were typed on the questionnaire. About three weeks after the first letter and

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[10]The use of a colored paper was suggested by Mildred Parten, Surveys, Polls, and Samples: Practical Procedures (New York: Harper Bros., Publishers, 1950, p. 383.

questionnaire were mailed, a follow-up post card was sent to non-respondents. This post card emphasized the importance of the study and urged completion of the questionnaire. After three more weeks, a new letter, questionnaire, and return envelope were sent on the assumption that the first set might have been misplaced. This second letter was as carefully composed as the first and made a final plea for cooperation.

Immediately after this second follow-up was sent, ten non-respondents were selected for personal interviews. The purpose of these interviews was to acquire some personal contact with the trainees and to judge the effectiveness of the questionnaire. It was concluded that the questionnaire was superior to the interviews, given the nature of the data desired.[11] This conclusion is based on two observations. First, it was difficult for a trainee to recall at a moment's notice what his income and employment had been over a previous period, especially if this period is as long as four or five years.[12] Second, the Indian trainees seemed very reluctant to give criticisms and evaluations of the training in person. In the questionnaire, on the other hand, almost

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[11]This conclusion must be accepted in light of the fact that questionnaire non-respondents were used to test the effectiveness of interviews. If the questionnaire respondents would have provided the same information in interviews as they did in questionnaires, then the two sources are comparable in terms of quality of data. In this case, however, the questionnaire would still be favored because of its lower cost.

[12]This same point is emphasized by Hardin and Borus, p. 135.

all respondents wrote a full page report evaluating all aspects of the training.

The decision to place complete data reliance on questionnaires was fully supported by trainee response. Of the 421 questionnaires sent, 210 or almost 50 per cent were returned. When the ten personal interviews are included, data was obtained on 52.3 per cent of the located trainees and 32.6 per cent of the total number of trainees originally included in the study. This high response again reflects the interest and appreciation of the opportunities offered by the AVT program and also the effectiveness of a carefully prepared questionnaire.

Summary

This chapter describes the methodology chosen for the present manpower training evaluation. The discussion was prompted by the present experimental stage of methodology used in manpower analyses of this nature. While this evaluation has deviated from methodology of previous studies, it is felt that all such deviations are justified.

The most surprising and encouraging result of the application of the methodology was the high response from the next-of-kin and from the trainees themselves. This was unexpected and speaks well for the Indian. While the many comments were not always laudatory of the training, they did demonstrate an interest in the AVT program and attempts to improve it. More than this, however, the response also

meant a willingness of the Indian to help his race improve itself.

CHAPTER V

CHARACTERISTICS OF THE TRAINEES

The purpose of the preceding chapters has been to provide background information necessary for an evaluation of the Bureau of Indian Affairs' adult vocational training program. This information has dealt with (1) the Oklahoma Indian in historical context, (2) the background and administration of Public Law 959, and (3) the methodology chosen for the evaluation.

The purpose of the next two chapters is to present the evaluation of training. The present chapter discusses the characteristics of the 672 Indians that received training through the Muskogee Area Office from 1958, to December 31, 1966. Chapter VI tests the hypothesis of no benefit and the hypothesis that variation in employment experience and income levels among trainees can be explained by a set of independent variables other than the receipt of training.

The characteristics of the 672 trainees to be discussed in this chapter are organized under four broad classifications. The first classification, social characteristics, deals with sex, age, marital status, number of children, education, tribal affiliation, and degree Indian blood. The second classification deals with the levels of the dependent

variables for the trainees during the period prior to receipt of training. The third classification concerns training characteristics such as year of application, agency initiating application, occupation for which training was received, status of training completion, cost of training, and whether the training was recommended by the GATB tests. The final classification encompasses post-training characteristics.

Social Characteristics

The first of the social characteristics to be discussed are the age and sex of the trainees (Table 5-1). As the data indicate, 493 or 73.4 per cent of the 672 trainees were male, while 179 or 26.6 per cent were female. Since Oklahoma Indians are equally distributed by sex, the males were obviously overrepresented in the trainee group.

The age distribution of the trainees was concentrated in the lower ages. This is demonstrated by the fact that 55 per cent of the trainees were less than 23 years old. This concentration can be explained by two facts. First, the Oklahoma Indian population itself is concentrated in the lower age brackets. The 1960 median age of Oklahoma Indians was 19.8 years for males and 21.7 for females. The corresponding figures for the trainees were 21.8 and 20.8.

The second fact explaining the low age concentration of the trainees is that adult vocational training was intended primarily for Indians between the ages of 18 and 35. While no Indians under 18 received AVT through the Muskogee area

TABLE 5-1

AGE AND SEX OF THE TRAINEES AT COMMENCEMENT OF TRAINING

Age	Male	Female	Total	Per cent Distribution
18	35	13	48	7.1
19	48	45	93	13.8
20	73	30	103	15.3
21	59	18	77	11.5
22	38	13	51	7.6
23	52	14	66	9.8
24	32	11	43	6.4
25	27	4	31	4.6
26	27	4	31	4.6
27	15	4	19	2.8
28	26	3	29	4.3
29	9	2	11	1.6
30	4	3	7	1.0
31	12	4	16	2.4
32	8	1	9	1.3
33	5	--	5	.7
34	8	2	10	1.5
35	3	2	5	.7
36	5	1	6	.9
37	1	1	2	.3
38	1	--	1	.1
39	--	1	1	.1
40	2	--	2	.3
41	--	--	--	---
42	2	--	2	.3
43	--	2	2	.3
44	--	--	--	---
45	--	1	1	.1
Age unknown[b]	1	--	1	.1
Total	493	179	672	100[a]
Median age	21.8	20.8	21.3	

[a]Individual percentages will not add to 100% due to rounding.

[b]This results from an AVT application that had been forwarded to another agency but which could not be located or returned to the Muskogee Area Office for analysis.

office, seventeen Indians over 35 did receive training. This suggests that the BIA is willing to help older Indians as well as younger ones.

The next social characteristics of interest are the marital status and number of children at the time of application for training (Appendicies F and G). About 60 per cent of the 672 trainees were single, i.e. had never been married, at the time of application. This concentration of single trainees is related to their low median age. Roughly one-third of the trainees were married at the time of application, all except two of whom were males. The two married women were apparently allowed to receive training because they were supporting a family in which the husband was unable to work. In summary, 625 (93 per cent) of the 672 trainees were either married or single.

It is interesting to note that there were forty-two divorced, separated, or widowed Indians who were trained. Thirty-eight of these were female Thus, the BIA was providing these women with training so that they could support their families and not have to rely on public assistance payments.

The number of children of the trainee that lived in the trainee's household at the time of application for training is included as a partial measure of the number of persons being supported by the income of the trainee. The average number of children supported by the trainee was small. If the 395 single trainees are sub-

tracted from those having no children, the result is that only fifty-two of the married, widowed, divorced, or separated trainees had no children. After thus removing the effect of the single trainees, the median number of children per trainee is only 0.98. Despite this low median, however, twenty-four families had five or more children and forty-six had four or more.

Table 5-2 indicates the highest level of education completed by the trainees. The lowest completion recorded is the 5th grade while the highest is the third year of college. Almost 60 per cent of the trainees were high school graduates, and the median educational attainment of both males and females was about the 11th grade. These medians are not strictly comparable to census data because of differences in age between the trainees and the census respondents; however, it is quite apparent that the trainees were well above the average Oklahoma Indian in educational attainment.

In addition to public schools, Indians can also attend Indian schools operated by the Bureau of Indian Affairs and mission schools operated by various churches.[1] The number of years of public, Indian, and mission school, and college completed by the trainees is shown in Table 5-3. Almost 90 per cent of the trainees had received some education in public

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[1]Indians have been able to attend public schools only since the passage of the Johnson-O'Malley Act in 1934. Prior to this the Bureau of Indian Affairs and missionaires were responsible for Indian education. U. S., Department of the Interior, Statistics Concerning Indian Education: Fiscal Year 1965 (Lawrence, Kansas: Haskell Institute, 1966), p. 2.

TABLE 5-2

HIGHEST LEVEL OF EDUCATION COMPLETED BY THE TRAINEES AT COMMENCEMENT OF TRAINING BY SEX OF TRAINEE

Years of School Completed	Male	Female	Total	Per cent Distribution
5	2	--	2	.3
6	5	--	5	.7
7	3	--	3	.4
8	36	8	44	6.5
9	39	9	48	7.1
10	56	10	66	9.8
11	64	16	80	11.9
12	266	131	397	59.1
Sub total	471	174	645	96.0[a]
College				
1 (13)	11	2	13	1.9
2 (14)	3	1	4	.6
3 (15)	1	1	2	.3
Sub total	15	4	19	2.8
Education unknown[b]	7	1	8	1.2
Total	493	179	672	100.0
Median school years completed	11.14	11.35	11.21	

[a]These percentages will not total 96.0% due to rounding.

[b]This results from AVT applications that had been forwarded to other agencies but which could not be located or returned to the Muskogee Area Office for analysis.

schools while almost half received all of their primary and secondary education in public schools. About a quarter of the trainees received some of their education in Indian schools although only twenty-five trainees went to Indian schools for all twelve years of pre-college education. Very few Indians attended mission schools, primarily because there is only one such institution currently in operation in the Anadarko and Muskogee areas. It is somewhat surprising to note that nineteen of the trainees had some college education prior to receipt of training.

TABLE 5-3

NUMBER OF YEARS OF PUBLIC, INDIAN, MISSION SCHOOL, AND COLLEGE COMPLETED BY THE TRAINEES

Years of School Completed	Public School	Indian School	Mission School	College
1	7	22	3	13
2	5	18	--	4
3	7	24	--	2
4	5	16	--	--
5	7	4	--	--
6	7	9	1	--
7	6	7	1	--
8	50	10	1	--
9	57	11	1	--
10	58	16	1	--
11	72	8	--	--
12	318	25	1	--
Total[a]	599	170	9	19
Median years completed	11.06	5.11	6.5	.7

[a]The totals exceed 672 because many trainees had attended more than one type of school.

The final social characteristics of the trainees are their tribal affiliation and degree of Indian blood (Appendicies H and I). Indians from the Five Civilized Tribes represented 54.5 per cent of the trainees; the remainder was composed of trainees from tribes coming during the "Second Trail of Tears" and afterwards. Because the Five Civilized Tribes include the great majority of Oklahoma Indians, these statistics indicate that the Five Civilized Tribes were underrepresented, relatively speaking, among the trainees.[2]

There were thirty-six separate tribes represented among the trainees, all of which except Sioux represented trainees residing in the Anadarko and Muskogee areas at the time of application for training. These thirty-six tribes formed fifty-five different combinations of tribal heritage which denotes a sizeable degree of intermarriage among the tribes. Eleven of these fifty-five represented a marriage between one of the Five Civilized Tribes and one or more of the tribes coming after the Civil War. This is a good indication of the degree of tribal intergration among Oklahoma Indians mentioned in Chapter III.

The Indian blood quantum of the trainees was very high. Two hundred ninety-seven (44.2 per cent) of the 672 trainees were full-bloods, and an additional 103 possessed three-fourths or more Indian blood. Five hundred forty-six of the

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[2]See Table 2-4 for the Oklahoma Indian population by selected tribal affiliations. The exact population by tribe is not know.

trainees had one-half or more Indian blood. The median degree of Indian blood was 84.9 per cent. This suggests that the BIA program has been aimed at Indians who are culturally distinct from the white man's world.

Pre-Training Levels of the Dependent Variables

The second group of characteristics concerns the employment, income, and labor force attachment of the trainees prior to the receipt of training. It will be recalled that the length of the pre-training period for each trainee considered in the study is equal to the time from the end of his training until December 31, 1966.

Table 5-4 shows the labor force attachment rates, employment rates, and average monthly earned income of the trainees by sex, age, and highest level of education for the pre-training period. The labor force attachment rate is the number of months spent in the civilian labor force as a per cent of the total number of months in the pre-training evaluation period. The employment rate is the number of months employed as a per cent of the number of months in the civilian labor force during the pre-training period. Average monthly earned income is the total income earned while in the civilian labor force divided by the number of months employed.

Labor Force Attachment Rate

It is not surprising that the labor force attachment rate of the male trainees exceeded that of the females during

TABLE 5-4

LABOR FORCE ATTACHMENT RATES, EMPLOYMENT RATES, AND AVERAGE MONTHLY EARNED INCOME OF THE TRAINEES PRIOR TO TRAINING, BY SEX, AGE, AND HIGHEST LEVEL OF EDUCATION COMPLETED

Item	Number of Trainees	Labor Force Attachment Rate[a]	Employment Rate[a]	Average Monthly Earned Income
Sex:				
Male	493	44.5	60.4	$183.55
Female	179	26.8	43.6	130.06
Total	672			
Age at commencement of training				
18	48	9.2	66.8	$129.46
19	93	17.0	54.7	144.48
20	103	23.0	53.8	151.66
21	77	33.3	55.5	158.35
22	51	45.1	42.2	177.43
23	66	39.4	56.5	158.85
24	43	47.2	42.3	181.11
25	31	56.2	63.1	177.31
26	31	65.7	61.6	210.11
27	19	48.3	55.7	188.96
28	29	71.6	52.9	199.32
29	11	82.0	62.3	173.26
30	7	67.3	70.9	156.42
31	16	91.0	64.9	233.78
32	9	76.2	79.1	213.20
33	5	100.0	76.5	191.14
34	10	74.8	73.3	162.34

TABLE 5-4 (Continued)

35	5	58.8	94.7	119.05
36	6	74.1	83.9	194.21
37	2	16.4	75.0	60.00
38	1	100.0	0	0
39	1	100.0	0	0
40	2	100.0	89.5	224.02
41	--	--	--	--
42	2	100.0	55.8	168.33
43	2	75.0	45.5	160.00
44	--	--	--	--
45	1	0	0	0
Total	671[b]			
Years of school completed				
5	2	100.0	72.1	164.19
6	5	98.2	87.5	186.01
7	3	58.7	47.7	195.09
8	44	60.2	59.4	186.23
9	48	52.3	55.8	165.17
10	66	59.5	57.3	168.98
11	80	40.9	66.3	188.03
12	397	31.1	53.2	170.97
13	13	62.6	55.5	228.52
14	4	33.7	94.6	256.23
15	2	100.0	47.4	146.67
Total	664[c]			

[a]See the discussion, p. 107, for specific meaning of these terms.
[b]There was one trainee whose age was unknown.
[c]There were eight trainees whose educational attainment was unknown.

the pre-training period. The most striking point about these rates is that they are both so low. The average male trainee was employed or seeking employment for only about five months out of every twelve months during the pre-training period. The average female trainee was economically active for only about three months out of every twelve months during the pre-training period.

Part of the explanation for the low labor force attachment rates can undoubtedly be attributed to the low age concentration of the trainees. Many of the trainees were in school for the majority of the pre-training period and were, therefore, not in the labor force. Moreover, about sixty of the trainees either (1) went into training directly from high school or (2) joined the armed services after high school and then went into training upon discharge. In either case, the labor force attachment rate would be zero for the pre-training period.

The second part of Table 5-4 tends to support age as at least one determinant of the low labor force attachment rates. The attachment rates appear to increase with age in such a manner as to suggest a significant positive correlation between the two. When age and the labor force attachment rate for each individual trainee are related statistically, the resulting simple correlation coefficient is +.44, which is statistically significant at the .01 level.

Another factor which could play a part in explaining low labor force attachment rates during the pre-training

period is the individual trainee's assessment of the possibility of obtaining a job. If this possibility is very slight, then the trainee may have decided not even to attempt to look for a job and, therefore, not to enter the labor force.

Employment Rates

The employment rate of the male trainees exceeded that of the females during the pre-training period although the male rate was still very low by most standards. For every twelve months spent in the civilian labor force during the pre-training period, the average male trainee was employed only seven months. The average female trainee was employed for only five months. Such low employment rates help explain the economic plight of the Indian.

The variation of employment rates with age is shown in the second part of Table 5-4. The range of employment rates is from zero to 94.7, although most of the rates are in the range of 40 to 70 per cent. It might be expected that employment rates would increase with age because skill and seniority are achieved by the worker. There does not, however, appear to be a close relationship between age and employment rates for the trainees. When each individual's age and employment rate is correlated, the simple correlation coefficient is +.03 and not statistically significant.

It was expected that there would be a direct relationship between the employment rates and levels of trainee educational attainment because education permits a person to

move up the occupational ladder to jobs where employment is more stable. The better educated trainees, however, were apparently not able to advance occupationally. Employment rates show no significant correlation with educational attainment (the simple correlation coefficient is -.03).

Average Monthly Earned Income

Although the average monthly earned income of the male trainees during the pre-training period exceeded that of the females by about $50, the male income was very low by most standards. When the employment rates are combined with the average monthly income, the average male trainee earned about $1,285 per year prior to the receipt of training and the average female earned only about $650 per year. The median annual income of a male Oklahoma Indian in 1959 was $1,538 while that of a female was less than $1,000.[3] Therefore, the male trainees, and probably the female trainees also, were clearly among the lower half of the Oklahoma Indian population in terms of income.

An indication of the range of the pre-training average monthly earned incomes of the trainees can be observed in the second part of Table 5-4. The earned income range was from $60 to $233 per month. It was expected that age and income of the trainees would be directly related because of seniority and skill development. When the individual train-

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[3]U. S., Department of Commerce, Bureau of the Census, U. S. Census of Population: 1960, Subject Reports, Nonwhite Population by Race, Final Report PC (2) - 1C, Table 38, p. 141.

ee's age is correlated with income, the simple correlation coefficient is +.12 and is statistically significant at the .01 level. Thus, while income apparently increases with the age of the trainee, it does not increase to a very high level.

The final portion of Table 5-4 shows the pre-training average monthly earned income by the level of educational attainment. It was expected that there would be a very close relationship between education and income. However, this expected relationship is not supported by correlation analysis because the -.03 coefficient of correlation between individual educational attainment and income is not statistically significant.

Even though education and income of the trainees during the pre-training period was apparently not related, the low absolute levels of income by level of educational attainment deserve emphasis. The highest income is only $256 per month which, when combined with the employment rate, results in an annual income of only $2,562. It is ironical that the lowest yearly incomes ($836) were for the two trainees having a three year college education. This probably explains why they were given the opportunity to receive training.

Summary

From the preceding discussion it is concluded that the Indians who received training were clearly in the lower economic half of the Indian population of Oklahoma. The lack of correlation of educational attainment with either income

or employment suggests that even high school graduates might benefit from additional training such as adult vocational training or on-the-job training. The labor force attachment rates of the trainees during the pre-training period were low, but could be explained in part by the low age concentration of the trainees. However, the number of trainees who decided not to try to find a job because of the poor prospects, can not be determined.

Training Characteristics

The third group of characteristics concerns the training which the Indians received. The specific characteristics discussed are (1) the agency and year of the training application, (2) the occupation for which training was received, (3) the status of training completion, (4) the role of GATB recommendations, (5) training cost, and (6) the length of the training evaluation periods.

Agency and Year of Application

First among the training characteristics are fiscal year of the training application and the Bureau of Indian Affairs agency initiating the application (Appendicies J and K). The largest number of trainees during a fiscal year was 108 in 1964 and the smallest was during 1958, the program's first year. The considerable variation in the number of trainees from year to year reflects the availability of training funds rather than variation of Indian interest in the program. It should be noted that the statistics for

1965 and 1966 are not complete because many Indians that began training during these fiscal years are still (1967) in training and thus are not represented in the evaluation.

Agencies in the Muskogee area initiated almost three-fifths of the training applications; except for one, the balance of the applications were from the Anadarko agencies. Specific agencies initiating the greatest number of trainees were Okmulgee (137 trainees), Kiowa (122), and Tahlequah (98).

Occupation

Table 5-5 shows the distribution of the trainees by the occupation for which training was received through the Muskogee Area Office. The occupations having the largest number of trainees were secretarial training, cosmetology, and auto mechanics. There were no Indians trained as registered nurses or appliance repairmen and only one each in licensed practical nursing and in banking and data processing. The most popular courses for males were auto mechanics, auto body, diesel mechanics, and barber training. For females, the most popular were secretarial training and cosmetology.

Status of Completion

The status of completion record for the trainees and the reasons for noncompletion are shown in Tables 5-6 and 5-7. Of the 672 trainees, 439 or 65.3 per cent completed training while 233 or 34.7 per cent did not. The completion rate for males was 66.9 per cent, which exceeded the 60.9 per cent completion rate for females. The average per cent

TABLE 5-5

DISTRIBUTION OF THE TRAINEES BY OCCUPATION FOR WHICH TRAINING WAS RECEIVED AND BY SEX OF TRAINEE

Occupation[a]	Male	Female	Total	Per cent Distribution
Accounting and/or Bookkeeping	14	3	17	2.5
Airline Service Mechanic	10	--	10	1.5
Auto Body	55	--	55	8.2
Auto Mechanics	62	--	62	9.2
Baking	13	--	13	1.9
Banking & Data Processing	--	1	1	.1
Barber	49	1	50	7.1
Building Construction	7	--	7	1.0
Building Maintenance	4	--	4	.6
Business Machines Operator	4	13	17	2.5
Commercial Art	3	1	4	.6
Cosmetology	4	60	64	9.6
Culinary Arts	15	2	17	2.5
Diesel Mechanics	52	1	53	7.9
Drafting	40	--	40	6.0
Dry Cleaning	28	5	33	4.9
Electronic Engineering Techician	5	--	5	.7
Furniture Upholstery	4	1	5	.7
Industrial Electrical Maintenance	16	--	16	2.4
Industrial Electronics	33	--	33	4.9
Letterpress Printing	6	--	6	.9
Licensed Practical Nurse	--	1	1	.1
Lithography Printing	29	--	29	4.3
Master Instrument Mechanic	4	--	4	.6
Meat Cutting	4	3	7	1.0

TABLE 5-5 (Continued)

Refrigeration & Air Conditioning	21	--	21	3.1
Secretarial	--	76	76	11.3
Stenographic	--	9	9	1.3
Television Electronics	11	--	11	1.6
X-Ray Technician	--	2	2	.3
Total	493	179	672	100.0[b]

[a]No Indians received training as appliance repairmen or as registered nurses although these courses were available through the Muskogee Area Office.

[b]Individual percentages will not add to 100% due to rounding.

TABLE 5-6

PERCENTAGE OF TRAINING COMPLETED BY SEX OF THE TRAINEE

Per cent of Training Completed	Male	Female	Total	Per cent Distribution
0-5	6	2	8	1.2
6-10	14	3	17	2.5
11-15	14	1	15	2.2
16-20	10	6	16	2.4
21-25	17	--	17	2.5
26-30	4	6	10	1.5
31-35	5	1	6	.9
36-40	11	8	19	2.8
41-45	7	1	8	1.2
46-50	17	4	21	3.2
51-55	4	--	4	.6
56-60	9	5	14	2.1
61-65	2	2	4	.6
66-70	5	4	9	1.3
71-75	10	3	13	1.9
76-80	3	1	4	.6
81-85	7	--	7	1.0
86-90	6	5	11	1.6
91-95	10	18	28	4.3
96-99	2	--	2	.3
Subtotal	163	70	233	34.7
100	330	109	439	65.3
Total	493	179	672	100.0

TABLE 5-7

REASONS FOR NONCOMPLETION OF TRAINING BY SEX OF THE TRAINEE

Reason for Noncompletion	Male	Female	Total	Per cent Distribution
Trainee's lack of progress and interest as expressed by excessive absences, etc.	60	28	88	37.7
Desire to seek work--was employed in short period	25	9	34	14.6
Unknown or unexpressed reasons	25	5	30	12.9
Family illness and/or personal problems	22	5	27	11.6
Trainee's misconduct--alcohol	19	4	23	9.9
Marriage of trainee	--	10	10	4.3
Trainee's misconduct--misc. reasons	3	5	8	3.4
Desire to seek work--was not employed in short period	1	3	4	1.7
Illness of trainee	3	1	4	1.7
Induction into the armed services	3	--	3	1.3
Trainee's misconduct--law violation	2	--	2	.9
Total	163	70	233	100.0

of training completed for all 672 trainees was 82.1 while for the 233 trainees not completing training, the average completion rate was about 48.4 per cent.

The most common reason for noncompletion of training (37.7 per cent) was the lack of progress of the trainee. For many of these eighty-eight trainees, the training was terminated by the area employment assistance officer rather than by the trainee. The second most common reason for noncompletion (14.6 per cent) was the desire to seek work where the trainee did obtain a job in a short period. Noncompletions resulting from trainee misconduct accounted for only 14.2 per cent of the noncompletions.

Tables 5-8 and 5-9 show the absolute and percentage distributions of the trainees by status of training completion for each occupation. The largest absolute completions of training occurred in cosmetology, barber training, and diesel mechanics. The largest absolute noncompletions were in secretarial training and auto mechanics.

The largest percentages of training completions occurred in building maintenance, meat cutting, banking and data processing, licensed practical nursing, barber training, and in culinary arts. The largest percentages of noncompletion occurred in commercial art and secretarial training.

The highest rates of course completions for males were in building maintenance and in barber training, while those for females were in licensed practical nursing and banking and data processing. The lowest rates of completion for

TABLE 5-8

DISTRIBUTION OF THE TRAINEES BY STATUS OF TRAINING COMPLETION FOR EACH OCCUPATION AND BY SEX OF THE TRAINEE

Occupation[a]	Training Status					
	Complete			Not Complete		
	Male	Female	Total	Male	Female	Total
Accounting and/or Bookkeeping	10	2	12	4	1	5
Airline Service Mechanic	5	--	5	5	--	5
Auto Body	35	--	35	20	--	20
Auto Mechanics	31	--	31	31	--	31
Baking	8	--	8	5	--	5
Banking & Data Processing	--	1	1	--	--	--
Barber	45	1	46	4	--	4
Building Construction	4	--	4	3	--	3
Building Maintenance	4	--	4	--	--	--
Business Machines Operator	3	5	8	1	8	9
Commercial Art	1	--	1	2	1	3
Cosmetology	4	49	53	--	11	11
Culinary Arts	13	2	15	2	--	2
Diesel Mechanics	36	1	37	16	--	16
Drafting	24	--	24	16	--	16
Dry Cleaning	15	3	18	13	2	15
Electronic Engineering Technician	3	--	3	2	--	2
Furniture Upholstery	3	1	4	1	--	1
Industrial Electrical Maintenance	12	--	12	4	--	4
Industrial Electronics	20	--	20	13	--	13
Letterpress Printing	3	--	3	3	--	3
Licensed Practical Nurse	--	1	1	--	--	--
Lithography Printing	22	--	22	7	--	7
Master Instrument Mechanic	2	--	2	2	--	2

TABLE 5-8 (Continued)

Meat Cutting	4	3	7	--	--	--
Refrigeration & Air Conditioning	16	--	16	5	--	5
Secretarial	--	33	33	--	43	43
Stenographic	--	6	6	--	3	3
Television Electronics	7	--	7	4	--	4
X-Ray Technician	--	1	1	--	1	1
Total	330	109	439	163	70	233

[a]No Indians received training as appliance repairmen or as registered nurses although these courses were available through the Muskogee Area Office.

TABLE 5-9

PER CENT DISTRIBUTION OF THE TRAINEES BY STATUS OF TRAINING COMPLETION FOR EACH OCCUPATION AND BY SEX OF THE TRAINEE

Occupation[a]	Training Status					
	Complete			Not Complete		
	Male	Female	Total	Male	Female	Total
Accounting and/or Bookkeeping	58.8	11.8	70.6	23.5	5.9	29.4
Airline Service Mechanic	50.0	---	50.0	---	50.0	50.0
Auto Body	63.6	---	63.6	36.4	---	36.4
Auto Mechanics	50.0	---	50.0	50.0	---	50.0
Baking	61.5	---	61.5	38.5	---	38.5
Banking & Data Processing	---	100.0	100.0	---	---	---
Barber	90.0	2.0	92.0	8.0	---	8.0
Building Construction	57.1	---	57.1	42.9	---	42.9
Building Maintenance	100.0	---	100.0	---	---	---
Business Machines Operator	17.6	29.4	47.0	5.9	47.1	53.0
Commercial Art	25.0	---	25.0	50.0	25.0	75.0
Cosmetology	6.2	76.6	82.8	---	17.2	17.2
Culinary Arts	76.6	11.7	88.3	11.7	---	11.7
Diesel Mechanics	67.9	1.9	69.8	30.2	---	30.2
Drafting	60.0	---	60.0	40.0	---	40.0
Dry Cleaning	45.5	9.1	54.6	39.4	6.0	45.4
Electronic Engineering Technician	60.0	---	60.0	40.0	---	40.0
Furniture Upholstery	60.0	20.0	80.0	20.0	---	20.0
Industrial Electrical Maintenance	75.0	---	75.0	25.0	---	25.0
Industrial Electronics	60.6	---	60.6	39.4	---	39.4
Letterpress Printing	50.0	---	50.0	50.0	---	50.0
Licensed Practical Nurse	---	100.0	100.0	---	---	---
Lithography Printing	75.9	---	75.9	24.1	---	24.1
Master Instrument Mechanic	50.0	---	50.0	50.0	---	50.0

TABLE 5-9 (Continued)

Meat Cutting	57.1	42.9	100.0	---	---	---
Refrigeration & Air Conditioning	76.2	---	76.2	23.8	---	23.8
Secretarial	---	43.4	43.4	---	56.6	56.6
Stenographic	---	66.7	66.7	---	33.3	33.3
Television Electronics	63.6	---	63.6	36.4	---	36.4
X-Ray Technician	---	50.0	50.0	---	50.0	50.0

[a]No Indians received training as appliance repairmen or as registered nurses although these courses were available through the Muskogee Area Office.

males were in auto mechanics, commercial art, letterpress printing, master instrument mechanic, and airline service mechanic. For females, the lowest rates were in secretarial training and x-ray technician. The courses having the highest absolute completions and per cent completion rates were barber training and cosmetology. The lowest rates were for secretarial training and auto mechanics. While there could be many reasons for the poor rates in these two courses, they suggest that the BIA should examine all aspects of both courses and attempt to improve the completion record.

GATB Recommendation

The use and importance of the GATB tests were discussed in Chapter III. It will be recalled from that discussion that employment assistance personnel counsel applicants on the basis of the occupational aptitude pattern (OAP) norms rather than the specific occupational norms. The results of this procedure are indicated in Table 5-10, which shows the distribution of trainees by whether or not the occupation for which training was received was recommended by specific occupation GATB test scores. A score is treated as "recommending" a specific occupation if there was no more than a two-point difference between the applicant's score and the norm. The choice of a two-point difference was based on the comments of several employment assistance officers who inferred that a two-point difference was not great enough to reject an applicant's occupational training choice.

As the table indicates, one-third of the trainees re-

ceived training in occupations which were not recommended by their aptitude test scores while only 42 per cent of the trainees' occupational training was recommended. For the remaining 25 per cent of the trainees, there were no specific norms for their occupations, or their test scores were not available.

TABLE 5-10

DISTRIBUTION OF TRAINEES BY WHETHER OR NOT THE OCCUPATION FOR WHICH TRAINING WAS RECEIVED WAS RECOMMENDED[a] BY SPECIFIC GATB TEST SCORE NORMS, BY SEX OF TRAINEE

Status of Recommendation	Male	Female	Total	Per cent Distribution
Occupation recommended	193	88	281	41.9
Occupation not recommended	166	56	222	33.0
Trainee's GATB scores not available or no specific norms exist for occupation	134	35	169	25.1
Total	493	179	672	100.0

[a]Test scores within two points of occupational norms are assumed to be recommended.

To acquire some knowledge of the significance of the GATB recommendations for the status of training completion, Table 5-11 was prepared. This table divides the trainees into two groups, those trainees who completed training and those who did not finish because of lack of training progress. Each

TABLE 5-11

DISTRIBUTION OF THE TRAINEES BY OCCUPATION, BY COMPLETION OR NONCOMPLETION OF TRAINING (DUE ONLY TO LACK OF TRAINEE PROGRESS), AND BY RECOMMENDATION BY SPECIFIC OCCUPATION GATB NORMS

Occupation[a]	Completed Training			Not Complete Due to Lack of Progress		
	Recommended	Not Recommended	GATB Not Available	Recommended	Not Recommended	GATB Not Available
Accounting and/or Bookkeeping	4	5	3	1	--	--
Airline Service Mechanic	2	3	--	--	2	--
Auto Body	14	9	12	3	2	1
Auto Mechanics	13	12	6	4	2	5
Baking	6	--	2	1	--	1
Banking & Data Processing	--	--	1	--	--	--
Barber	26	16	4	--	2	--
Building Construction	2	1	1	1	--	--
Building Maintenance	--	--	4	--	--	--
Business Machines Operator	6	2	--	1	3	1
Commercial Art	--	--	1	--	--	2
Cosmetology	36	10	7	5	1	--
Culinary Arts	4	6	5	--	--	1
Diesel Mechanics	17	13	7	3	3	--
Drafting	7	10	7	4	1	2
Dry Cleaning	4	6	8	4	--	--
Electronic Engineering Technician	--	--	3	--	--	1
Furniture Upholstery	1	2	1	--	1	--
Industrial Electrical Maintenance	6	5	1	--	--	1
Industrial Electronics	3	4	13	1	3	2
Letterpress Printing	2	1	--	--	--	--
Licensed Practical Nurse	--	--	1	--	--	--
Lithography Printing	10	9	3	1	--	2
Master Instrument Mechanic	1	1	--	--	--	--
Meat Cutter	--	--	7	--	--	--
Refrigeration & Air Conditioning	8	4	4	1	--	3
Secretarial	14	11	8	5	7	2
Stenographic	1	1	4	--	1	--
Television Electronics	1	2	4	--	--	1
X-Ray Technician	1	--	--	--	--	--
Total	189	133	117	35	28	25

[a]No Indians received training as applicance repairmen or as registered nurses although these courses were available through the Muskogee Area Office.

group was then distributed by whether or not their training was recommended by their GATB test scores and finally, distributed by occupation.

Of those trainees completing training, 30 per cent were trained in occupations not recommended by their GATB scores. It is concluded, therefore, that the GATB scores by themselves are a very poor means of predicting completion of training. The employment assistance personnel were, therefore, probably correct in not using the specific GATB occupational norms in counseling applicants. This is not to say, however, that GATB test scores cannot measure the degree of aptitude of a person to perform a job. It was hoped that the distribution of trainees who did not complete training because of lack of progress would shed light on this question; however, as Table 5-11 indicates, the number of such trainees is too small for any conclusion.

Training Cost

The next training characteristic is that of training cost (Appendicies L and M). It will be recalled from Chapter III that in addition to paying for actual training, the BIA also provides a subsistence allowance to the trainee and his family. The highest average training and subsistence costs for completed training were in commercial art ($6,428), television electronics ($6,231), and building construction ($5,864), while the lowest were in meat cutting ($656) and x-ray technician training ($505). The highest average training and subsistence costs for noncompleted training were in-

dustrial electrical maintenance ($3,146) and commercial art ($3,032). The lowest average costs for noncompletion were in cosmetology ($441) and x-ray technician training ($383).

The monetary importance of noncompletion of training should be emphasized. The total training and subsistence funds expended by the Bureau of Indian Affairs on the 439 trainees who completed training was $1,608,542, an average of $3,664 per trainee. At this average rate, the $469,302 spent on the 233 noncompletions would have completely trained 128 trainees. It is, therefore, important that the Bureau of Indian Affairs decrease the noncompletion rate so that the allocated training funds can provide completed training for more Indians.

The per capita administrative costs of the adult vocational training program are difficult to determine. This is because (1) the Adult Vocational Training budget of the Muskogee area office of employment assistance is not broken down into training and administrative categories, and (2) because the administrative cost includs the cost of processing those trainees who reside in the Muskogee and Anadarko areas but which go to other areas for training. An approximation of the per capita administrative cost of the 672 trainees follows:[4]

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[4]These figures were supplied by the Muskogee area employment assistance officer.

	Total AVT appropriation for the Anadarko and Muskogee areas, fiscal years 1958 through 1966	$3,637,160
Minus	Total cost of AVT training and subsistence for 672 trainees during the same period	2,077,844
Equals	Total AVT administrative cost for period	1,559,316
Minus	Estimated administrative cost of trainees leaving areas for training (estimated 1/3 of total administrative cost)	519,772
Equals	Total administrative cost for 672 trainees	$1,039,544
	per capita administrative cost	$1,547

This per capita administrative cost may appear high, but it should be emphasized that this allocation partially supports eleven employment assistance offices in the two areas. Although many of these offices could undoubtedly be consolidated in the interest of economy, the Indian clients would suffer in terms of convenience of service and expense of travel to an employment assistance office.

Length of the Training Evaluation Periods

It will be recalled that the basic technique of training evaluation is to compare the pre-training levels of the dependent variables with these levels during the period following the receipt of training. The length of both periods for an individual trainee is determined by the time from the end of his training until December 31, 1966. Table 5-12 shows the distribution of the trainees by the length of these periods in six month time intervals. As the table indicates, the number of trainees is fairly evenly distributed among the range of time period intervals. The median length of the pre- and post-training evaluation periods for male

trainees is about forty months while for females it is thirty-two months. The median length for all trainees is about thirty-eight months.

TABLE 5-12

DISTRIBUTION OF THE TRAINEES BY THE NUMBER OF MONTHS FROM THE END OF TRAINING UNTIL DECEMBER 31, 1966 AND BY SEX OF THE TRAINEE

Number of Months	Male	Female	Total	Per cent Distribution
0-6	32	15	47	7.0
7-12	48	17	65	9.7
13-18	44	28	72	10.7
19-24	33	15	48	7.1
25-30	23	12	35	5.2
31-36	45	12	57	8.5
37-42	37	15	52	7.7
43-48	24	11	35	5.2
49-54	27	14	41	6.1
55-60	29	9	38	5.7
61-66	23	6	29	4.3
67-72	34	8	42	6.2
73-78	26	4	30	4.5
79-84	39	7	46	6.8
85-90	16	6	22	3.3
91-96	10	--	10	1.5
Over 97	3	--	3	.4
Total	493	179	672	100.0[a]
Median number of months	39.9	32.0	38.1	

[a]Individual percentages will not total 100% due to rounding.

The maximum length of post-training evaluation periods used in the previously cited evaluations of manpower training has been from twelve to eighteen months. It is felt that the expanded periods of this evaluation will provide a much more meaningful evaluation of manpower training by determining if training can improve employment and income over an extended period of time.

Post-Training Characteristics

The final characteristics of the trainees are those following the receipt of training. The status of post-training data collection is shown in Table 5-13. As was mentioned in Chapter IV, 421 of the trainees were located, and post-training data was obtained on 220 or 62.3 per cent of these. This represents a final data collection for 32.7 per cent of the original 672 trainees. Post-training data was obtained on 29.6 per cent of the males and 40.8 per cent of the females.

Table 5-14 shows the state of residence of the 421 trainees who were located. As might be expected, the large majority of these, some 76.9 per cent, resided in Oklahoma. The next most important states of residence were Texas and California. If military personnel are not counted, the trainees were found in eighteen states.

When the application for training was completed, the trainees were asked where they wished to reside following training. The response was that 315 or 46.9 per cent of the

TABLE 5-13

STATUS OF POST-TRAINING DATA COLLECTION BY SEX OF TRAINEES

Status	Male	Female	Total	Per cent Distribution
Trainee known to have deceased after training	6	--	6	.9
Trainee not located for post-data	179	66	245	36.5
Trainee located but did not return questionnaire	161	40	201	29.9
Post-training data obtained[a]	147	73	220	32.7
Total	493	179	672	100.0

[a]It will be recalled that 10 of these came from personal interviews and the remainder from the mailed questionnaires.

TABLE 5-14

STATE OF RESIDENCE OF TRAINEES AT TIME OF LOCATION FOR POST-DATA COLLECTION BY SEX OF TRAINEE

State of Residence	Male	Female	Total	Per cent Distribution
Oklahoma	224	100	324	76.9
Military - overseas or at U. S. base	23	--	23	5.5
Texas	14	4	18	4.3
California	14	2	16	3.8
Missouri	2	1	3	.7
Kansas	5	2	7	1.7
New Mexico	5	--	5	1.2
Colorado	2	1	3	.7
Arkansas	5	--	5	1.2
Ohio	5	1	6	1.4
Michigan	1	--	1	.2
Utah	1	--	1	.2
Georgia	1	--	1	.2
Arizona	1	--	1	.2
Maryland	--	1	1	.2
Indiana	1	--	1	.2
Mississippi	3	--	3	.7
South Dakota	--	1	1	.2
North Carolina	1	--	1	.2
Total trainees located	308	113	421	100.0[a]

[a]Individual percentages will not total 100% due to rounding.

672 trainees desired to remain in Oklahoma after training while the remainder wished either to go elsewhere (38 or 5.6 per cent) or else had no preference (319 or 47.4 per cent). Table 5-15 shows the state of residence at the time of post-data collection of the 315 trainees who originally desired to remain in Oklahoma after training. Of the 315, 112 were not located while 165 or 52.4 per cent resided in Oklahoma and 3.5 per cent were in the armed services. The remaining 8.5 per cent resided out of the state. While this latter group represents only twenty-seven Indians, it does demonstrate a significant decision on their part to move. To what extent the receipt of training prompted reversal of mobility attitudes held before training cannot be known; however, it is doubtful that training reduced willingness to move.

Although the information provided by respondents to a questionnaire is important, it is sometimes just as important to know the characteristics of those who did not respond. By knowing these characteristics, the possible existence of a bias in the data can be identified and perhaps measured. This evaluation will not attempt to statistically measure the extent of any bias, but will attempt to identify categories where possible biases in the questionnaire data might exist.[5]

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[5]Michael E. Borus, "Response Error in Survey Reports of Earnings Information," American Statistical Association Journal, LXI (September, 1966), pp. 729-738,

TABLE 5-15

STATE OF RESIDENCE OF THOSE TRAINEES INDICATING A DESIRE TO LOCATE IN OKLAHOMA AFTER END OF TRAINING, BY SEX OF THE TRAINEE

Residence at Time of Location	Male	Female	Total	Per cent Distribution
Not located	70	42	112	35.6
Located in:				
Oklahoma	101	64	165	52.4
Military - overseas or at U. S. base	11	--	11	3.5
Texas	6	1	7	2.2
California	4	2	6	1.9
Missouri	--	1	1	.3
New Mexico	3	--	3	.9
Colorado	1	1	2	.6
Arkansas	1	--	1	.3
Ohio	3	--	3	.9
Michigan	1	--	1	.3
Maryland	--	1	1	.3
Indiana	1	--	1	.3
North Carolina	1	--	1	.3
Total	203	112	315	100.0[a]

[a]Individual percentages will not total 100% due to rounding.

Table 5-16 compares the 220 questionnaire respondents and the 421 trainees who were located with respect to the agency initiating the training application. The data indicates some interesting differences in the response rate among agencies. Indians from three of the agencies exhibited very low questionnaire response rates. These were from (1) the Cheyenne-Arapaho agency, (2) the Kiowa agency, and (3) the Choctaw agency. Two of these agencies are largely representative of tribes that came during the second Trail of Tears, and the third represents the Choctaws, many of whom chose to remain in Mississippi in 1830. While this is not to state that these low response rates can be explained solely by cultural differences among the tribes, these differences do suggest that low levels of acculturation may have been a factor leading to low response rates.

Table 5-17 compares all located trainees and those returning questionnaires with respect to tribal affiliation and degree of Indian blood. The trainees of the Five Civilized Tribes were 21 per cent more responsive to the questionnaire than were the remainder of the trainees. As mentioned above, there is strong historical support for attributing this to cultural differences between the Five Civilized Tribes and the tribes coming during the second Trail of Tears.

If the trainees in Table 5-17 are divided into three categories of degree of Indian blood, the per cent of response to the questionnaire is as follows: less than one-

TABLE 5-16

STATUS OF POST-DATA COLLECTION OF THE LOCATED TRAINEES BY AGENCY INITIATING APPLICATION

Agency Initiating Application	Total Trainees Located	Trainees on Whom Post-Data was Obtained	Per cent of Located Trainees on Whom Post-Data was Obtained
Ardmore	6	3	50.0
Cheyenne-Arapaho	24	7	29.2
Choctaw	7	2	28.6
Kiowa	69	24	34.8
Okmulgee	87	51	58.6
Pawnee	47	21	44.7
Quapaw	48	27	56.3
Shawnee	21	11	52.3
Tahlequah	65	44	67.7
Talihina	40	25	62.5
Wewoka	6	4	66.7
Other	1	1	100.0
Total	421	220	52.3

TABLE 5-17

STATUS OF POST-DATA COLLECTION OF THE LOCATED TRAINEES BY TRIBAL AFFILIATION AND BY DEGREE OF INDIAN BLOOD

Item	Total Trainees Located	Trainees on Whom Post-Data was Obtained	Per cent of Located Trainees on Whom Post-Data was Obtained
Tribal Affiliation			
Five Civilized	246	150	61.0
Others	175	70	40.0
Total	421	220	52.3
Degree Indian Blood			
Full-blood	168	79	47.0
over 3/4 but less than full	37	18	48.6
3/4	32	18	56.3
over 1/2 but less than 3/4	15	8	53.3
1/2	85	47	55.3
over 1/4 but less than 1/2	48	28	58.3
1/4	35	22	62.8
Degree blood unknown	1	--	----
Total	420	220	52.3

half blood, 60.2 per cent; over one-half but less than three-fourths blood, 55.0 per cent; three-fourths to full-blood, 48.5 per cent. This distribution is very interesting because from a historical point of view, it could be argued that the willingness to cooperate and interest in the research might be inversely related to degree Indian blood. That is, because the integration of full-bloods into the white man's world before statehood was always far below that of the mixed-bloods, it might be expected that the full-bloods would still resist cooperation and not return the questionnaire. Low-bloods, on the other hand, because of their long heritage of living among white men, might be more cooperative. This remains, however, only a hypothesized relationship.

The data in Table 5-18 compare the respondents and all the trainees located in terms of age and education. The data suggest that the response rate declined somewhat with age, although there was really only one age category which was far below the others. This declining rate probably can be explained by the fact that older persons are less willing to take the time to complete a questionnaire and also that they have more difficulty remembering past jobs and income.

A reasonable a priori hypothesis is that the response rate of the trainees would be directly related to their levels of education. This is because the less highly educated might not understand the purpose of the research and also might have difficulty understanding and completing the

TABLE 5-18

STATUS OF POST-DATA COLLECTION OF THE LOCATED TRAINEES BY AGE OF THE TRAINEE AT COMMENCEMENT OF TRAINING AND BY HIGHEST LEVEL OF EDUCATION

Item	Total Trainees Located	Trainees on Whom Post-Data was Obtained	Per cent of Located Trainees on Whom Post-Data was Obtained
Age at Commencement of Training			
18-20	150	86	57.3
21-25	163	85	52.1
26-30	66	29	43.9
31-35	29	16	55.2
36-40	7	2	28.6
41 and over	5	2	40.0
Age unknown	1	--	0
Total	421	220	52.3

TABLE 5-18 (Continued)

Highest Level of Education (years of school completed)			
5	2	2	100.0
6	1	1	100.0
7	3	2	66.7
8	26	16	61.5
9	29	14	48.3
10	41	13	31.7
11	46	19	41.3
12	260	149	57.3
13	9	4	44.4
14	2	--	0
15	1	--	0
Education unknown	1	--	0
Total	421	220	52.3

questionnaire. This direct relationship, however, was not observed in the data in Table 5-18. In fact, the highest response was among the lowest educated while the three highest educated trainees provided no response to the questionnaire. It is possible that the poorer educated trainees appreciated the significance and value of the training more than the higher educated trainees.

Table 5-19 compares the located trainees and those who returned the questionnaire with respect to the number of months in the pre- and post-training evaluation periods. The response rate might be expected to decline as the number of months increases because of difficulty in recalling job and wage data and because the training was less well remembered. As the data indicate, however, this relationship was not apparent; almost every six month interval was well represented by questionnaire responses.

Table 5-20 shows the different response rates for the status of training completion, for per cent of training completion, and for the different reasons for noncompletion. As was expected, the response rate for the completors was considerably better than for the noncompletors.

There does not appear to be a direct relationship between the response rate and the per cent of training completion. Indeed, one of the highest return rates was for completion rate of 21 to 30 per cent, and the lowest rate was for completion rates of 81 to 90 per cent.

The third part of Table 5-20 shows response rates by

TABLE 5-19

STATUS OF POST-DATA COLLECTION OF THE LOCATED TRAINEES BY THE NUMBER OF MONTHS FROM END OF TRAINING UNTIL DECEMBER 31, 1966

Months	Total Trainees Located	Trainees on Whom Post-Data was Obtained	Per cent of Located Trainees on Whom Post-Data was Obtained
0-6	32	16	50.0
7-12	45	23	51.1
13-18	44	25	56.8
19-24	32	13	40.6
25-30	22	14	63.6
31-36	35	19	54.3
37-42	34	20	58.8
43-48	20	6	30.0
49-54	23	12	52.2
55-60	24	15	62.5
61-66	18	9	50.0
67-72	26	11	42.3
73-78	17	9	52.9
79-84	29	19	65.5
85-90	13	6	46.1
91-96	6	3	50.0
97 or greater	1	--	0
Total	421	220	52.3

TABLE 5-20

STATUS OF POST-DATA COLLECTION OF THE LOCATED TRAINEES BY WHETHER OR NOT TRAINING WAS COMPLETED, BY PER CENT OF TRAINING COMPLETION AND BY REASONS FOR NONCOMPLETION OF TRAINING

Item	Total Trainees Located	Trainees on Whom Post-Data was Obtained	Per cent of Located Trainees on Whom Post-Data was Obtained
Training Was:			
Complete	290	165	56.9
Not complete	131	55	42.0
Total	421	220	52.3
Per cent of Training Completion			
0-10	14	3	21.4
11-20	14	6	42.8
21-30	15	10	66.7
31-40	14	6	42.8
41-50	19	8	42.1
51-60	13	6	46.1
61-70	9	6	66.7
71-80	12	3	25.0
81-90	7	1	14.2
91-99	14	6	42.8
Total	131	55	42.0

TABLE 5-20 (Continued)

Reasons for Noncompletion			
Desire to seek work--was employed in short period	19	11	57.9
Desire to seek work--was not employed in short period	2	2	100.0
Trainee's lack of progress and interest as expressed by excessive absences, etc.	49	22	44.9
Trainee's misconduct--alcohol	13	2	15.4
Trainee's misconduct--law violation	--	--	--
Trainee's misconduct--other	5	2	40.0
Illness of trainee	3	2	66.7
Family illness and/or personal problems	15	5	33.3
Marriage of trainee	8	4	50.0
Induction into the armed services	2	--	0
Unknown or unexpressed reasons	15	5	33.3
Total	131	55	42.0

reasons for noncompletion of training. It is not surprising that one of the lowest response rates was for those trainees whose training was terminated by the BIA because of misconduct involving alcohol. It is surprising, however, to note the high response rate from trainees whose training was terminated because of lack of progress. This response rate was expected to be very low because of resentment over being terminated.

Summary

The characteristics of the trainees have been discussed in this chapter. As a result of this discussion, several important points stand out.

First, the average trainee was fairly well representative of the Oklahoma Indian except in terms of the amount of education received. The average trainee was far better educated than the average Oklahoma Indian, surpassing him by almost three full years of school.

Second, despite the fact that the educational attainment of the trainees was high, the employment and income levels of even the best educated trainees were still low by most standards. This indicates a need for post-high school vocational training for Indians.

Third, while there was a fairly high noncompletion rate among the trainees, the BIA closely watched trainee progress and terminated those whose progress was unsatisfactory. However, the noncompletion rates for secretarial training and

auto mechanics are still too high. These two courses should be thoroughly examined so that the noncompletion rates might be lowered in the future.

Another very important point concerns the GATB scores. GATB occupational recommendations using the specific occupation norms is a very poor means of predicting training completion. The branch of employment assistance personnel were quite correct, therefore, in using the occupational aptitude pattern norms in counseling.

Training apparently widened the horizons of at least a few of the trainees. Some trainees moved out of state following training even though they had preferred to remain in the state at the time they applied for admittance to the program. This out-of-state movement indicates a willingness to try something new.

Finally, there is some indication that the questionnaire response rate was partially affected by the cultural and historical background of the trainees. Other factors which apparently influenced the rate were age, the level of education, and the status of training completion.

CHAPTER VI

THE EVALUATION OF TRAINING

The purpose of this chapter is to evaluate the adult vocational training received by the 220 trainees on whom post-training data was obtained. Two hypotheses are tested. The first hypothesis is that Indians who receive adult vocational training do not benefit in terms of average monthly income, rate of employment, and rate of labor force attachment. The second is that variation in employment experience, income levels, and rates of labor force attachment among the trainees can be explained by a set of independent variables other than the receipt of training. The chapter concludes with a brief discussion of the absolute levels of employment and income by occupation.

The First Hypothesis

The first hypothesis is that the 220 Indians on whom post-training data were obtained did not benefit from their adult vocational training. The methodology involves a pre-post training comparison of the three dependent variables, and the computation of a benefit-cost ratio. Prior to testing the hypothesis, however, two separate problems must be discussed. These relate to (1) noncomparable data and (2)

adjustment of the dependent variables for non-training factors.

Noncomparable Data

The one requirement for use of a pre-post technique is that comparable data must be available for both time periods. If the data for a particular subject are not comparable, then that subject cannot be used in the evaluation. The purpose of this portion of the chapter is to discuss the nature and extent of noncomparable data in testing the first hypothesis. There was a problem of noncomparable data for two of the variables, employment rate and income.

Per cent Employment. There are two reasons why there might be noncomparable employment rate data for a trainee. First, the trainee might not have been in the labor force during either the pre- or post-training evaluation period. Second, the per cent employment data for either period might be unknown.

The per cent employment data were not comparable for sixty-five trainees. Only one of these cases resulted from unknown data, while the remaining sixty-four resulted from trainees not being in the civilian labor force during one of the two time periods. Of the sixty-four trainees, fifty-eight were not in the labor force during the pre-training period. This resulted primarily from the trainee entering training directly from high school or following military discharge. The six trainees who were not in the labor force following training either entered the armed services or with-

drew from the labor force because of ill health.

Average Monthly Income. The reasons for noncomparable income data are the same as those for noncomparable per cent employment data. The trainee might not have been in the labor force during one of the two periods or the income data might be unknown.

Income data were noncomparable for eighty-two trainees. Sixty-four of these were not in the labor force during one of the two periods. These were the same trainees mentioned above in connection with per cent employment.

The income data for the remaining eighteen trainees were unknown for a variety of reasons. For nine, the returned questionnaire was incomplete with respect to income data. Whether this was a result of non-disclosure, simple oversight, or not being able to recall a wage or salary for a particular job cannot be known. A personal letter was sent to each of these nine trainees requesting the income data, but no answer was received.

For eight of the remaining nine trainees, the reasons for unknown income were that (1) the trainee had worked in a large number of day-to-day jobs and could not remember the wage in each or (2) the trainee had worked on a commission basis where income varied considerably. The remaining trainee was one of the ten interviewed and he simply refused to disclose income data.

Summary of Treatment of Noncomparable Data. When the pre-post technique was chosen for the evaluation, the problem

of noncomparable data was not thought be be significant. As a result of the above comments, however, it is obvious that the large amount of noncomparable data weakens the analysis. It is strongly recommended that future manpower evaluations assess the probability of obtaining a large amount of noncomparable data before selecting the pre-post evaluation technique. This is especially true where the trainees are young as was the situation in this evaluation.

Adjustment of the Dependent Variables

This portion of the chapter discusses the adjustment of the dependent variables for changes caused by factors other than the receipt of adult vocational training. As was mentioned in Chapter IV, this adjustment is made easier by using the pre-post technique instead of a control group technique. The adjustment of each of the dependent variables is discussed separately.

Labor Force Attachment Rate. The determinants of the labor force attachment rates of the trainees could be many and varied.[1] Chief among these might be (1) age, (2) tribal affiliation, (3) sex, (4) magnitude of income from nonwork sources, (5) marital status, and (6) proximity to urban cen-

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[1]For an analysis of labor force participation rates see Robert L. Sandmeyer and Larkin Warner, "The Determinants of Labor Force Participation Rates, With Special Reference to the Ozark Low-Income Area," (Preliminary draft of an unpublished report of the Research Foundation, Oklahoma State University, July, 1967). While labor force participation rates and the dependent variable used in this evaluation, labor force attachment rates, are not the same measure, the determinants of both are probably the same.

ters.[2] Ideally, differences in the pre- and post-training labor force attachment rates should be adjusted for changes in these above factors prior to testing the first hypothesis of no benefit. Because a complete analysis of the labor force attachment rates of Oklahoma Indians does not exist, it is not possible to adjust for most of these factors. It is possible, however, to adjust for one factor, age.

It was determined in Chapter V that the age of the trainees was correlated with pre-training labor force attachment rates. This relationship makes adjustment possible. The adjustment procedure is the construction of an index comparing the effect of age on the labor force attachment rate of a trainee during the pre-training period with the effect of his age during the post-training. The index is used to deflate the post-training labor force attachment rate by an amount which reflects the change in the attachment rate attributed to the increased age of the trainee during the post-training period. For a complete description of the adjustment procedure, see Appendix N.

The above procedure adjusts for age; however, it does not adjust for changes in any other factors. Therefore, if the post-training labor force attachment rates are found to exceed the pre-training levels, this does not necessarily mean that the receipt of adult vocational training was the cause. On the other hand, adjustment means that it is much

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[2]Ibid., pp. 80-94.

less likely that any differences were caused by age.

Employment Rate. Of all the variables used in the discussion of pre-training characteristics of the trainees in Chapter V, only four could have changed between the pre- and post-training evaluation periods.[3] These are (1) the age of the trainee, (2) the marital status of the trainee, (3) the number of children of the trainee, and (4) the level of aggregate economic activity. Each of these will be examined to determine the required adjustment, if any, in the employment rate.

It was determined in Chapter V that no significant correlation existed between age and the pre-training employment rates of the trainees. It is, therefore, concluded that no adjustment of employment rates need be made for age differences of the trainees between the two periods of evaluation.

The next two factors are marital status and the number of children of the trainee. Table 6-1 shows the marital status and number of children of the 220 trainees for whom post-training data was obtained. These distributions are shown at (1) the time of application for training, and (2) the time of post-training data collection.

As the table indicates, there were notable changes in marital status between the two periods. The most significant changes occurred between the married and single classi-

[3]The variables discussed in Chapter V were (1) age, (2) sex, (3) marital status, (4) number of children, (5) educational attainment, (6) tribal affiliation, and (7) degree of Indian blood.

fications as more than half of the single trainees were married following the receipt of training. The median number of children increased from .79 to 1.25 when the effect of the single trainees is removed by subtracting the number of single trainees from the number of trainees having no children.

TABLE 6-1

MARITAL STATUS AND NUMBER OF CHILDREN OF THE TRAINEES FOR WHOM POST-DATA WERE OBTAINED AT THE TIME OF APPLICATION AND AT THE TIME OF POST-DATA COLLECTION

Item	Time of Application	At Time of Post-Data Collection
Marital status		
Married	65	144
Single	134	57
Widow	2	1
Divorced	17	15
Separated	2	3
Total	220	220
Number of children		
0	154	79
1	29	50
2	19	38
3	10	32
4	2	8
5	4	7
6	2	3
7	--	3
Total	220	220
Median number of children (excluding the effect of single persons)	.79	1.25

Despite the notable changes in marital status and number of children, it was decided to make no adjustment in the employment rates for these factors. This decision was based on the fact that the numerical relationship between marital status, number of children, and employment for Oklahoma Indians is unknown and can not be determined from the data in this evaluation.

The only remaining factor for which adjustment of employment rates is to be made, therefore, is the level of aggregate economic activity. The purpose of the adjustment procedure is to eliminate the effect of the level of aggregate economic activity on the pre- and post-training employment rates of the trainees. The basic adjustment procedure is the construction of an index which compares the effect of the level of aggregate economic activity on employment during the pre-training period with the effect on employment during the post-training period. This index is multiplied by the post-training employment rates to adjust for changes caused by different levels of economic activity during the two periods. A complete description of the adjustment procedure appears in Appendix O.

Average Monthly Earned Income. As in the case of employment rates, the only pre-training measured variables that could have changed between the pre- and post-training evaluation periods were age, marital status, number of children, and the level of aggregate economic activity. Each of these is examined to determine the required adjustment, if

any, in the average monthly earned incomes of the trainees.

It was found in Chapter V that age and the pre-training average monthly earned incomes of the trainees were positively correlated. Despite this relationship, however, it was decided not to adjust income for differences in the ages of the trainees between the two periods of evaluation. This decision was based on two considerations. First, when the average monthly earned income of the trainees during the pre-training period was regressed against their age, the simple linear regression coefficient was 2.24, or $2.24 for every year of age of the trainee.[4] Since the maximum pre- and post-training differences in the average age of the trainees is only about eight years, adjustment for age would not produce a very sizeable change in post-training income. Second, the above regression does not take into account the possible effect of other variables on income, notably that of the level of aggregate economic activity. If this variable were included with age in a multiple regression analysis of income, the level of aggregate economic activity would probably explain a far greater amount of the variation in income than would age. Moreover, the regression coefficient of age in the above analysis could actually be lower than 2.24 which would make an even smaller adjustment in income of the trainees.

The next two factors are marital status and the number

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[4]The regression equation is: Average monthly earned income ($) = 97.83 + 2.24 (age).

of children of the trainees. Because the numerical relationship between these two factors and the average monthly earned income of Oklahoma Indians is unknown, no adjustment is possible.

The only remaining factor for which average monthly earned income must be adjusted is the level of economic activity. The basic adjustment procedure is analogous to the one for employment rate adjustment. That is, the construction of an index number which compares the effect of the level of economic activity on the average monthly earned incomes of the trainees during both the pre- and post-training evaluation periods. This index is multiplied by the post-training average monthly earned incomes to remove the effect of the level of aggregate economic activity. A complete description of the adjustment procedure appears in Appendix P.

Dependent Variable Test of the Hypothesis of No Benefit

The dependent variables used are (1) the labor force attachment rate of the trainees, (2) the employment rates of the trainees, and (3) the average monthly earned income of the trainees. All 220 questionnaire respondents are included in the labor force attachment test of the hypothesis. However, because of the problem of noncomparable data, such is not the case in the income and employment tests. In order to include the same trainees, the eighty-two trainees whose income data were not comparable were excluded from both tests. Thus, there were 138 of the 220 questionnaire and interview respondents included in the income and employment tests of

the first hypothesis.

It was originally intended that, in addition to testing the null hypothesis for those trainees completing training, a test of significant difference between pre- and post-training levels of employment and income would be run for those trainees who did not complete training. The purpose of this test was to determine if there was a minimum per cent of training completion below which no benefit was received. The knowledge of such a completion level would be quite valuable to BIA personnel when counseling trainess. Such a test using labor force attachment rates was not contemplated because the attachment rates could not be completely adjusted.

When the eighty-two trainees mentioned above were excluded from the income and employment evaluation, there were only twenty-six of the remaining 138 trainees who had not completed training. Because the completion rates for these twenty-six trainees were from five per cent to 95 per cent, it was not possible to have enough trainees in any one range of training completion to make a meaningful statistical analysis. Regretably, therefore, only those 112 trainees who completed training could be included in the employment and income test of the null hypothesis.

One of the benefits of the pre-post evaluation technique is that the subject being evaluated remains the same. Because of this fact and because all other factors that could affect the levels of the dependent variables were adjusted

for, it was determined to test the null hypothesis using a statistical technique for paired observations.[5] The null hypothesis in such a technique is that the mean of the population of differences between the paired observation is zero.[6] In this case, the paired observations are the pre-training and post-training adjusted levels of the dependent variables.

The results of the statistical test of the null hypothesis using each of the dependent variables are shown below. The values of Student's t for all of the dependent variables are statistically significant at the .9995 level. This means that (1) the differences between the pre-training and post-training adjusted levels of employment and income are statistically significant for those trainees who completed training, and (2) the labor force attachment rate differences are statistically significant for all 220 of the trainees.

Dependent Variable	Value of Student's t	Degrees of Freedom
Adjusted average monthly earned income	13.9	111
Adjusted employment rate	7.4	111
Adjusted labor force attachment rate	4.8	219

The average difference between pre-training and post-training adjusted income for the 112 trainees was $160.74

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[5]Robert G. D. Steel and James H. Torrie, Principles and Procedures of Statistics (New York: McGraw-Hill Book Company, Inc., 1960), pp. 78-80.

[6]Ibid., p. 78.

per month, or about $1,929 per year assuming a 100 per cent employment rate. The average difference between the pre-training and post-training adjusted employment rates is 28.3 per cent, which is an increase of almost three and one-half months per year of employment. Both of these income and employment gains must be viewed as sizeable considering the low pre-training income and employment rate levels.

Benefit-Cost Test of the Hypothesis of No Benefit

The fourth criterion used to test the hypothesis of no benefit is a benefit-cost analysis. While the first three criteria, the dependent variables, emphasized only the gains from training, the benefit-cost ratio has the advantage of weighing benefits against program costs.

As mentioned in Chapter IV, problems associated with application of benefit-cost analysis include (1) computation of a trainee's opportunity cost of training and (2) choice of the rates of discount to apply to private and social benefits. In light of these problems, it is important to make all assumptions used in the benefit-cost analysis as explicit as possible. For that reason, the means of computing each of the major elements in the benefit-cost ratio of this evaluation is discussed below.

Private Benefits. The private benefits of training are those which accrue to the individual trainee over a number of years. However, because the decision to enter training is a question of the present, the future stream of benefits must be discounted so as to give their present value to the

trainee. The annual net private benefits of adult vocational training is determined by taking the difference between the average annual adjusted income received during the post-training evaluation period and the average annual income received during the pre-training evaluation period. This amount is then reduced by 20 per cent to reflect the income and social security taxes which must be paid on the increased income that results from training. Because of measurement problems, it is assumed that the reduction in net benefits attributable to the lost unemployment benefits is negligible.

The choice of the rate of discount to apply to the annual net private benefits of training involves many considerations.[7] At one extreme of the possible rates is the rate of interest that the trainee would receive on his savings. At the other extreme is the rate that the trainee would have to pay to borrow the discounted value of the increase in income resulting from training. This evaluation will use a rate of discount of 10 per cent which is the average of a 5 per cent savings rate and a 15 per cent borrowing rate.[8]

The second major procedure in calculating the present

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[7]For a discussion of the problems involved in the choice of a rate of discount see R. Turvey and A. R. Prest, "Cost-Benefit Analysis: A Survey," Economic Journal, LXXV (December, 1965), pp. 697-700.

[8]Borus also used rates of 5 per cent and 15 per cent which he considered to be the extremes. Michael E. Borus, "The Economic Effectiveness of Retraining the Unemployed," (unpublished Ph.D. dissertation, Yale University, 1964), p. 29.

value of the flow of future benefits is to determine the number of years during which the trainees will receive the benefits of training. It could be assumed that trainees would receive the benefits from the end of training until age 65. However, this assumption must be qualified by the following considerations: (1) a certain number of the trainees will die during the period following receipt of training; (2) another group of trainees will be forced to withdraw from the labor force because of ill health; (3) a group of trainees will undoubtedly leave their training occupations and enter other occupations; and (4) changes in technology might decrease the probability that a trainee would continue to use his training-acquired skills. Because of these considerations, it is reasonable to assume that the benefits of training will not be received until age 65, but rather for some definite number of years following training. This evaluation will assume that the net benefits will be received for a period of ten years following training.

Private Costs. The private costs of training are primarily the earnings which each subject gives up while receiving training. The calculation of these opportunity costs is always one of the major problems of benefit-cost ratios. It is reasonable to assume that these private costs are zero for the trainees. The rationale of this assumption is that trainees are paid subsistence allowances which provide for the housing and other personal and family expenses incurred during training. Because the average yearly income level of

the trainees prior to the receipt of training was only $1,115, it is probable that the BIA training subsistence allowance is at least equal to this amount and, therefore, at least equal to the private opportunity cost of training.[9] Indeed, some of the trainees' foregone earnings would probably have been less than the BIA subsistence payments. This would in fact represent negative private opportunity costs. The possibility of negative private opportunity costs is reflected in the fact that Indians have queued up to receive adult vocational training.

Social Cost. The social costs of adult vocational training are the funds expended on the training of each subject. These are composed of (1) the payments to the various training institutions,[10] (2) subsistence payments to the trainees, and (3) the cost incurred by the BIA in administering the AVT program.[11]

Social Benefits. Social benefits are the benefits which accrue to society as a result of adult vocational training. Under certain conditions dollar flow of social

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[9]The accounting methods used by the BIA do not readily permit division of the total costs of training into (1) training and (2) subsistence categories. An estimate is not possible because of factors such as (1) uncompleted training, (2) family size, and (3) special payments by the BIA over and above the subsistence allowance.

[10]This assumes that state training institutions follow a rule of full-cost pricing to the federal government.

[11]Because of problems in attempting to determine yearly training costs, it will be assumed that these costs all occur at the end of the training period and at the beginning of the benefit period.

benefits will be, at a minimum, identical to the private benefits of the individual trainee. Among the most important of these conditions are the following:[12] (1) that the trainees do not replace other workers in the training occupations and by so doing shift their unemployment to these workers; (2) that there are no other unemployed workers who are able and willing to fill the positions obtained by the trainees; (3) that in the absence of training, the labor force would not adapt to the labor shortages in the training occupations. This evaluation will assume that these conditions are met and, therefore, that the dollar flow of social benefits are at least equal to that of private benefits. This assumption is reasonable because the number of trainees is so small that if the above conditions are not completely satisfied, the decrease in social benefits would be negligible. Moreover, no estimate is made of social benefits difficult to quantify such as reduced public expense on crime, health, and direct transfer payments.

The decision of society to provide training services is a decision of the present. Hence, the social benefits must be discounted over a number of years to give their present value to society. As in the case of private benefits, a ten year period of benefit receipt will be assumed for society. However, because society will be able to borrow at a risk-free interest rate, the social rate of discount will be 5

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[12]Borus, p. 42.

per cent instead of the 10 per cent rate assumed for private benefits.

Findings of Benefit-Cost Analysis. Because of the previously discussed problems of (1) noncomparable data and (2) the small number of noncompletions remaining after removal of noncomparable data, only the 112 trainees used in the income and employment test were included in the benefit-cost analysis.

The private benefit-cost ratio compares the discounted private benefits of training with the trainee's opportunity cost of training. However, because the opportunity cost of training is assumed to be zero, no private benefit-cost ratio can be computed. The present value (discounted over a ten year period at 10 per cent) of the private income stream is $10,391.

The social benefit-cost ratio compares the discounted social benefits of training with society's cost of providing the training. The average social cost of training per trainee is $5,472 while the present value (discounted over a ten year period at 5 per cent) of the average social benefit per trainee is $13,057. The social benefit-cost ratio is 2.39. Thus, an average of $2.39 in social benefits were produced by each $1.00 expenditure on trainees completing adult vocational training.

Conclusion

On the basis of the statistical tests of the hypothesis of no benefit, three conclusions arise. First, the receipt

and completion of adult vocational training through the Muskogee Area Office of the Bureau of Indian Affairs lead to higher average monthly earned income and higher employment rates. The increases in income and employment are sizeable and should substantially benefit the average Indian trainee. Second, the labor force attachment rates of the trainees are higher following training although this difference cannot be attributed definitely to the receipt of training. The difference is not, however, a result of the increased age of the trainees in the post-training period. Third, the social benefits from completed training far exceed society's cost in producing it.

The Second Hypothesis

The second hypothesis is that variation in employment experience and income levels among the trainees can be explained by a set of independent variables other than the receipt of training. The independent variables included in the analysis were chosen on the basis of the information provided in the trainee's application.

The statistical method chosen for testing the second hypothesis is a multiple regression analysis. There are two dependent variables used in the analysis: (1) the difference between pre-training average monthly earned income and post-training adjusted average monthly earned income, and (2) the difference between pre-training employment rates and post-training adjusted employment rates. A third dependent

variable, labor force attachment rate, is not used because the post-training rates could not be completely adjusted (see p. 152).

The independent variables included in the multiple regression analysis, and the relationship hypothesized to exist between them and the dependent variables are as follows:

Sex: Because the primary breadwinner for many families is the male, there might be a tendency for males to work harder at training than females, and therefore, to reap greater rewards from training.

Tribe: There is strong historical support for hypothesizing that the Five Civilized Tribes would be more receptive to training than would the remainder of the state's Indian population. In the analysis, tribe is broked down into only the Five Civilized tribes and Other tribes.

Degree Indian Blood: There is also strong historical support for hypothesizing that variation in the dependent variables could be inversely related to the degree Indian blood of the trainee.

Marital Status: Because a married person has to provide for his or her family, there might be a tendency to work harder, and therefore, to benefit more from training.

Highest Level of Education Completed: Because much of the adult vocational training is conducted by institutions that are considered to be oriented

toward post-high school training, the level of formal education prior to receipt of training might be positively related to trainee success.

Number of Years of Public and Indian School Completed: These two variables were included to determine how public school-educated Indians compared with Indian school-educated trainees. From a historical point of view, it might be expected that public school-educated trainees would be better prepared for training.

Age: Younger trainees whose minds are more receptive to new ideas might benefit more from training than older trainees who have been out of school for a longer period.

Per Cent of Training Completed: It would be expected that this variable would explain a great deal of the variation in success among the trainees. The greater the per cent of training completed, the greater should be the subject's level of earnings and employment.

Number of Months in the Labor Force During the Post-Training Period: This variable was included to determine if early gains in income and employment from training might decrease with the length of time in the labor force. As mentioned in Chapter V, the periods of this evaluation of training are much longer than previous evaluations. If the

training-related gains are relatively short-lived, then the conclusions of training evaluations using shorter periods should be reassessed.

Multiple regression analyses for both dependent variables were run for the 138 trainees remaining after the removal of noncomparable data. (See Appendix R for the regression equations for both dependent variables.) The analysis using employment rates as the dependent variable reveals only two independent variables that are significant at the 1 per cent level. These are (1) months in the labor force and (2) the years of public school completed by the trainees. The most significant finding, however, is that these two variables explain only 14 per cent of the employment variation.

The regression analysis using average monthly income as the dependent variable identifies four independent variables that are significant at the 10 per cent level. These are (1) per cent of training completion, (2) highest level of education, (3) age, and (4) sex. These four variables, however, explain only 5 per cent of the variation in income.

The coefficients of determination for the income and employment rate equations are .117 and .196, respectively. The conclusion reached as a result of these coefficients is that the variation in employment experience and income levels among the trainees is not explained in any important way by the set of independent variables. Further investigation suggests two likely explanations for the results of the multiple regression analyses.

Because the receipt and completion of training have al-

ready been shown to be associated with higher income and employment, it would be expected that per cent of training completion would be a very important factor explaining the variation. However, because only twenty-six of the 138 trainees in the regression had not completed training, there were not enough noncompletions to run a meaningful regression using this variable. Moreover, these twenty-six trainees exhibited completion rates ranging from 5 to 95 per cent.

A graphic illustration of this problem is represented in the hypothetical scatter diagram in Figure 6-1. This shows what the scatter diagram for the 138 trainees would look like if per cent of training completion is plotted against the change in the average monthly earned income. The diagram would not change in appearance if employment were used instead of income. Because only twenty-six points are located below the 112 points at 100 per cent training completion, it is not likely that meaningful regression results would be obtained with this variable.

The second possible explanation for the unimpressive regression results is that one potentially important independent variable could not be included. This variable is the occupation for which training was received. Table 6-2 shows the average difference between the pre-training and post-training average monthly incomes of the 138 trainees included in the multiple regression analysis by occupation. The differences that exist in the income data among occupations suggest that occupation explains a great deal of the

variation in income of the trainees.

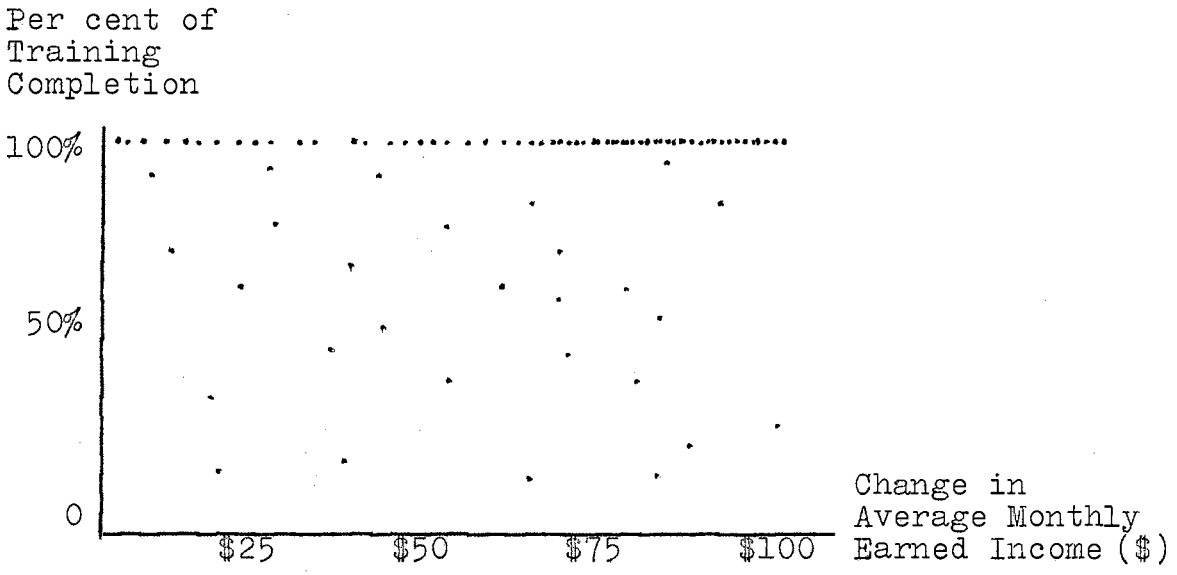

Figure 6-1. Hypothetical Scatter Diagram Plotting Per Cent of Training Completion and Change in Average Monthly Income

Occupation could not be included as a variable in the multiple regression analysis for several reasons. First, a single variable of "occupation" could not be included because there was no other training program with which the AVT program and its occupational-mix could be compared. Second, the inclusion of each AVT occupation as an independent variable would have resulted in too many variables for a meaningful statistical analysis. Third, it was felt that the differing skill requirements of the various occupations do not permit the combining of occupations into a small enough

TABLE 6-2

AVERAGE DIFFERENCE BETWEEN PRE-TRAINING AND POST-TRAINING AVERAGE MONTHLY INCOME OF THE 138 TRAINEES INCLUDED IN THE MULTIPLE REGRESSION ANALYSIS BY OCCUPATION FOR WHICH TRAINING WAS RECEIVED

Occupation[a]	Trainees	Average Difference between Pre-Training and Post-Training Average Monthly Income
Accounting and/or Bookkeeping	1	$431.64
Commercial Art	1	400.00
Electronic Engineering Technician	2	317.04
Industrial Electronics	9	303.45
Drafting	9	293.54
Television Electronics	4	283.24
Refrigeration and Air Conditioning	4	249.26
Lithography Printing	6	233.35
Building Construction	2	208.21
Auto Body	6	202.87
Industrial Electrical Maintenance	6	199.46
Diesel Mechanics	12	192.06
Letterpress Printing	4	182.06
Barber	14	146.97
Building Maintenance	2	137.83
Culinary Arts	4	133.31
Business Machines Operator	4	117.46
Stenographic	3	111.17
Dry Cleaning	10	101.77

TABLE 6-2 (Continued)

Cosmetology	3	$101.63
Auto Mechanics	17	94.95
Meat Cutting	2	69.84
Secretarial	13	57.49
Total	138	

[a]All 32 occupations are not represented because (1) there may not have been any Indians trained, (2) there may not have been any questionnaire response, or (3) the data for some occupations may not have been comparable.

number of groups to permit regression analysis.

Conclusion

Because of the two statistical problems discussed above, it is concluded that no statistical procedure, including multiple regression analysis, could produce meaningful results. As a result, the hypothesis of explanation of variation cannot be statistically tested, given the available data. This is, of course, a partial result of the initially unpredicted magnitude of noncomparable data that was encountered among the 220 questionnaire respondents. It should again be emphasized that before the pre-post technique is chosen, careful study be made of the possibility of a sizeable amount of noncomparable data.

Absolute Levels of Post-Training Employment and Income

The evaluation of training has made little mention of the absolute levels of post-training employment and income. These absolute levels are very important when analyzed with respect to occupation. The evaluation of training concludes, therefore, with a brief discussion of the absolute levels of employment and income by occupation.

Table 6-3 compares the pre-training and unadjusted post-training levels of employment and income by occupation for the 220 trainees on whom post-training data was obtained. The third column for both variables, entitled Post-Training Related, shows the unadjusted levels of the two variables for only those jobs using the skills acquired from

TABLE 6-3

PRE- AND UNADJUSTED POST-TRAINING EMPLOYMENT RATES AND AVERAGE MONTHLY EARNED INCOME OF THE 220 TRAINEES ON WHOM POST-TRAINING DATA WERE OBTAINED BY OCCUPATION FOR WHICH TRAINING WAS RECEIVED

Occupation[a]	Per cent Employment			Average Monthly Earned Income		
	Pre-Training	Post-Training	Post-Training Related	Pre-Training	Post Training	Post-Training Related
Accounting and/or Bookkeeping	0	97.8	97.8	$ 0	$431.64	$431.64
Auto Body	79.8	96.1	76.2	195.88	398.75	441.64
Auto Mechanics	62.9	96.4	58.0	184.41	279.36	308.47
Barber	54.2	94.3	80.6	193.19	340.16	329.56
Building Construction	80.0	100.0	95.1	116.67	324.88	323.08
Building Maintenance	70.0	89.5	0	133.09	270.92	0
Business Machines Operator	100.0	78.3	66.0	144.13	261.59	284.39
Commercial Art	0	100.0	100.0	0	400.00	400.00
Cosmetology	35.4	83.2	66.5	118.09	219.72	206.44
Culinary Arts	38.9	79.3	51.5	238.09	371.40	331.19
Diesel Mechanics	46.4	98.4	84.0	202.60	394.66	416.89
Drafting	60.2	99.6	77.6	163.58	457.12	450.41
Dry Cleaning	57.6	90.9	45.7	177.29	279.06	298.94
Electronic Engineering Technician	77.3[b]	100.0	49.2	205.88[b]	522.92	555.91
Furniture Upholstery	---	100.0	7.1	---	241.07	160.00
Industrial Electrical Maintenance	90.3	91.8	69.0	213.96	413.42	428.98
Industrial Electronics	71.6	96.9	71.6	128.60	432.05	435.15
Letterpress Printing	47.4	98.9	82.2	169.63	351.69	334.81
Lithography Printing	34.7	92.0	91.3	197.32	430.67	432.00
Meat Cutting	34.6	92.1	5.3	162.22	232.06	200.00
Refrigeration & Air Conditioning	44.0	99.2	96.7	188.00	437.26	441.23
Secretarial	42.5	84.3	50.0	163.01	220.50	249.83
Stenographic	54.8	84.1	69.8	109.02	220.19	232.08
Television Electronics	65.2	98.2	60.3	138.40	421.64	483.44

[a] All 32 occupations are not represented because (1) there may not have been any Indians trained, (2) there may not have been any questionnaire response, or (3) the data for some occupations may not have been comparable.

[b] Trainees not in labor force prior to training.

training. In calculating both the pre- and post-training figures, the effects produced by zero labor force attachment rates and unknown income have been removed.

There are several important points about the employment data in Table 6-3. First, the post-training employment rates exceed the pre-training rates in all but one occupation, business machines operator. Moreover, the differences between pre- and post-training rates are very substantial in most occupations. Second, the rates for post-training related employment represent a sizeable portion of the total post-training employment rates in most occupations. This indicates that most trainees were able to use their training-acquired skills in a substantial amount of their employment following training.

The most impressive data in Table 6-3 concern average monthly earned income. In all of the occupations, post-training income exceeded that during the pre-training period, although the pre-post differences by occupation vary considerably as indicated in Table 6-2. The most important income data are the post-training related average monthly incomes by occupation. These levels indicate the income that an average trainee in each occupation can expect to receive following receipt of training. For over half of the occupations, the income received in training related employment surpassed that received in non-training related employment.

There is a wide range in the training related incomes among occupations. Table 6-4 ranks the occupations from

TABLE 6-4

RANKING OF OCCUPATIONS FROM HIGH TO LOW IN TERMS OF UNADJUSTED AVERAGE MONTHLY EARNED POST-TRAINING RELATED INCOME

Occupation	Post-Training Related Average Monthly Income
Electronic Engineering Technician	$555.91
Television Electronics	483.44
Drafting	450.41
Auto Body	441.64
Refrigeration & Air Conditioning	441.23
Industrial Electronics	435.15
Lithography Printing	432.00
Accounting and/or Bookkeeping	431.64
Industrial Electrical Maintenance	428.98
Diesel Mechanics	416.89
Commercial Art	400.00
Letterpress Printing	334.81
Culinary Arts	331.19
Barber	329.56
Building Construction	323.08
Auto Mechanics	308.47
Dry Cleaning	298.94
Business Machines Operator	284.39
Secretarial	249.83
Stenographic	232.08
Cosmetology	206.44
Meat Cutting	200.00
Furniture Upholstery	160.00
Building Maintenance	No jobs held using training acquired skills

high to low in terms of monthly post-training related income. The largest monthly income in a training related occupation was received by electronic engineering technicians while the lowest were received by furniture upholsters, meat cutters, and cosmetologists. It is interesting to note in Table 6-3 that upholsters and meat cutters remained in their skill-related job only a short period of time and then moved to higher income, but not training related, jobs. It is significant that of the twenty-four occupations in Table 6-4, eleven provide greater than $400 a month in income in training related employment; only five provide less than $250.

Conclusion

The dependent variable test of the hypothesis of no benefit indicated that trainees who complete adult vocational training substantially benefit in terms of higher monthly income and employment rates. The above discussion of the absolute levels of post-training income and employment clearly supports this conclusion. However, the discussion also demonstrates that the benefits of training are not evenly distributed among the different occupations. Trainees in some of the occupations clearly benefit more from training than do others.

CHAPTER VII

REVIEW OF FINDINGS AND POLICY RECOMMENDATIONS

The primary purpose of this final chapter is to summarize the findings of the evaluation of the Bureau of Indian Affairs' adult vocational training program in Oklahoma, and to present policy recommendations suggested by these findings. Interjected between the review of findings and the policy recommendations is a section which, though impressionistic in nature, is extremely revealing. That is, the trainees' own opinions of the program transcribed directly from their questionnaire responses.

Review of Findings

The United States enjoys the highest standard of living of any nation in the world. At the same time, however, it is confronted by the very real problem of the existence of unemployment and poverty among certain groups of its population. One such group is composed of nonwhite Americans. While a nonwhite person to most people is an American Negro, the nonwhite citizen that suffers the most from unemployment and poverty, relatively speaking, is the American Indian.

The great poverty of the Indian has been recognized and policies have been enacted to mitigate it. One such policy

is Public Law 959 which provides Indians with institutional and on-the-job training so that they can obtain better jobs which can provide a decent standard of living. The purpose of this study is to evaluate the institutional training received by Indians through the Muskogee Area Office of the Bureau of Indian Affairs.

To make such an evaluation meaningful, it must be conducted in light of a knowledge of the culture and heritage of the Indian recipients, most of whom are from Oklahoma. The cultural background of Oklahoma Indians can be related to two sources: (1) the relatively advanced Five Civilized Tribes that were moved to Oklahoma from the Southeast before the Civil War and (2) the much less advanced tribes, primarily from the plains, that were moved to Oklahoma after the Civil War.

Until about 1889, these two groups of Indians completely dominated the social, economic, and cultural life of Oklahoma. Following this date, however, the white settlers' influence gradually became dominant in the state and clearly surpassed that of the Indian in 1907, when Oklahoma achieved statehood. Since statehood, not much is known about the activities of the Oklahoma Indian except that they have not been tied to reservations as have most of the nations' other Indians.

While the present economic condition of the Oklahoma Indian is better than that of some other Indians in the United States, it is still very low by white standards. This

is witnessed by a 12 per cent unemployment rate of Oklahoma Indians in 1960 and the fact that 35 per cent of male Oklahoma Indians received less than $3,000 in income in 1959.

The 672 Indians selected to receive institutional training between 1958 and December 31, 1966, are fairly representative of the Oklahoma Indian except with respect to educational attainment. The trainees had received an average of two years more school than had the average Oklahoma Indian. Despite this fact, however, the trainees were clearly in the lower economic half of the state's Indian population. The average annual income of the males prior to training was $1,285, while that of the females was only $650.

The institutional vocational training program is administered by the Branch of Employment Assistance of the Bureau of Indian Affairs. The administration differs from all other federal manpower programs in that (1) there is no active attempt to recruit trainees, (2) there are no minimum enrollments before a course may be offered, and (3) training is always conducted by full-time and experienced vocational education teachers.

The criteria chosen to evaluate the institutional training were (1) the employment rate of the trainees, (2) their average monthly earned incomes, (3) their labor force attachment rates and (4) a benefit-cost analysis. The methodological technique for evaluation of training using the first three criteria was a comparison of the levels of these dependent variables during the pre-training period with the

adjusted levels of these variables during the period following the receipt of training. This technique has the advantage of holding the "person" constant for comparison. It has the disadvantage, however, of the possibility of obtaining a sizeable amount of noncomparable data as was the case in this evaluation. The technique for evaluation using the benefit-cost analysis was the computation of a benefit-cost ratio comparing the benefits of training with the costs of providing it.

It was concluded, as a result of the first part of the training evaluation, that receipt and completion of training significantly benefits the trainee in terms of increased income and employment. The average increase in annual income after adjustment was $1,929 while the average increase in employment after adjustment was about three and one-half months of additional employment each year. The social benefit-cost ratio was found to be 2.39.

It was not statistically possible to determine if a group of independent variables explain the variation in income and employment rates among the trainees. This was the result of (1) the sizeable amount of noncomparable data and (2) not being able to include occupation in the regression analysis.

The above comments summarize the important findings of the evaluation of training conducted thus far. It only remains to touch upon the evaluation of training by the trainees themselves and to present the policy recommendations.

The Opinion of the Trainees

The statistics cited in Chapter VI demonstrate the worth of adult vocational training received by those trainees who completed training. These statistics, however, cannot measure the real significance of the training to the lives of the trainees. This significance must be gauged by the trainees themselves.

To acquire some knowledge of how the trainees felt about the training, the last page of the questionnaire asked their opinion of the training and requested that they write their criticisms, suggestions, and general feelings about the training. In many respects, this information was the most important provided by the respondents.

Table 7-1 shows the response of the 220 questionnaire and interview respondents to the question--"Which of the following statements best expresses your opinion about the training you received?" As the data indicate, 82.7 per cent of the respondents felt that they received some use from the training. Only 14 per cent indicated almost no use from the training which is significant considering the fact that 25 per cent of the 220 trainees did not complete training.

TABLE 7-1

THE OPINION OF TRAINING OF THE 220 QUESTIONNAIRE AND INTERVIEW RESPONDENTS

Opinion	Trainees	Per cent Distribution
It has been of real use to me	136	61.8
It has been of some use to me	46	20.9
It has been of almost no use to me	31	14.1
No opinion stated	7	3.2
Total	220	100.0

It is difficult to separate the written comments of the respondents into neat classifications. Perhaps the best way to present the opinion of the traineesis to simply quote some of their most revealing comments. These are presented under the two broad headings of (1) comments about the value and significance of the training and (2) criticisms and recommendations.

Significance of Training

"The training I received at Tech school was actually the difference between a common labor employee and a trained technician."

"I am deeply obligated to the Bureau of Indian Affairs and our elected officials."

"In my opinion this training program is the best thing that has happened to the American Indian as it has given myself and many others a chance to learn a trade and get a well paying job."

"I think the training I received has helped me a little in the past but has given me hope for a better future."

"My training . . . has definitely been valuable to me . . . I hope the program stays in effect for a long time. I know there are other Indians that could use it."

"The training I received has been of great benefit to me. I feel sure I would not be able to hold down such a position as I now have, had I not been able to receive the schooling under the Bureau of Indian Affairs."

"When I entered OST I was a 19½ year old widow with two children. . . When I left, I was capable of providing the necessities of life for the three of us. What I liked about my training was the confidence and knowledge of having been well trained in my vocation."

"As for the likes of the training which I received, it can be summed up very briefly as being the success to my career."

"I'll just put it this way. Before I began my training at Oklahoma State Tech I was taking home $38.00 per week. I started work at . . . at $100.00 per week. In less than four years I have made shop manager of the body shop and nothing but my training got it for me. In other words, there just isn't enough words to say. I can't think of any way they could better their training. Except maybe to explain and make the students understand the importance of their training."

"I would like to thank you for this chance to express my views on the 959 program which myself and my family were a part of while attending OST. This is a great opportunity for any Indian to further his values in life and better his standard of living. OST is a very good technical school and is highly regarded as such by almost every type of industry."

"This training for the American Indian has brought me the independence that I so much needed and couldn't have got otherwise. There is no need for anyone of Indian heritage to be without an education, altho' I can't help but wonder why some return to their old ways and not use their training at all. I think this training is best thing that ever happened to the American Indian. . ."

These comments demonstrate what no statistics can--the significance of adult vocational training to the lives of

the recipients. These comments could well be used by the Bureau of Indian Affairs in counseling young Indians about the importance of staying in school and of obtaining vocational training. The most important comments, however, are those concerning criticisms and suggestions of the training.

Criticisms and Recommendations

"There was nothing I didn't like about my schooling, and I feel real lucky to have been able to take advantage of such an opportunity."

"I have not yet run into any problems in my field that was not covered in some phase of the course."

"If I had it to do over I'd trained for field of electronics--something that has a future." (Trained in dry cleaning)

"I received excellent training. . . However, didn't much care for the book learning, though now I realize how important it was and still is. My only regret is I did not complete the course."

"I think the program is very helpful to the Indians if more of us would get employment in the type of work for which we have been trained." (Trained in stenographic)

"The training did not help me in any way in my various jobs, only because I didn't finish my course."

"If I had completed the course I feel the training would have helped me, but unfortunately I dropped out before my completion date."

"I attended the school for one semester, and cannot deny that it would have been of great use to me if I went on. I was young then and didn't really have my mind on my studies. . . If I had it to do over again, I probably would try a lot harder."

"I did not realize at the time of my training just how much it was going to help me out in the field, but now I find that I could not have gotten the job I have without it. I also found out that if I had studied harder and put more time with the books I would have been much better off."

"My training at Oklahoma State Tech helped me to gain a knowledge in engineering drafting. This training was excellent. I'm sure State Tech can be rated as one of the top drafting schools. My only regret is that I received no college credits for the two years spent there. I have wanted to continue my education in the field of engineering but would hate to do the same preparatory work in some university. The Bureau of Indian Affairs was helpful in every way. I can only hope that State Tech. will become accredited in the future."

"There should be more mature consultation and advise given to students. This in reference to the employees of the Bureau of Indian Affairs."

"I feel that the Indian people will benefit more from the training if they are interviewed more carefully so they can do the work that they are capable of doing and most of all be happy with the work. I was told that due to my lack of education I could only take welding or auto mechanics or some related field. After I was in Okmulgee in training, I found out that I could have taken almost anything provided I could have kept up my grades. I am making more money now than before I took the training, but I am doing work that I don't really like."

"The Indians and other should have better counseling before they start in a certain trade. To make sure its what they want to do to make a living. I have seen many guys who wasted their time and money. For when they finished school they found it wasn't really what they wanted to be. There are many such cases where they are working at something different than what they have been trained."

"I think the American Indian can help themselves more by putting forth a little more effort in learning."

"To benefit from skill or knowledge one acquires from training requires perserverance and the ability to assume responsibility whether he be Indian, Negro, white, or Chinese."

"I personally don't believe that the training program can be changed to better help the American Indian--but feel that the Indian, not as a member of a race or a tribe but as an individual has to change or prepare himself to accept and make use of all the educational assistance that is handed

> to him (free). In this I include myself because I feel that I haven't taken full advantage of all the opportunities available to me . . ."
>
> "As my own opinion of possibly changing the training for the betterment of the American Indian, there is no such thing. For it is the American Indian who must change. For all the training is available to consume, but as I see it happen in a majority of cases, the training received is not being put to use. As for correction of this, it is an individual matter which must be overcome. For the American Indian has had the tendency to say: Why should I push myself toward a goal if I can just make it along and live from day to day? This is what must be changed, and the desire to strive, achieve, before the American Indian can help himself."

These comments cover a wide range of recommendations and criticisms of the training. Several of them were repeated frequently enough by the respondents to deserve consideration by the Bureau of Indian Affairs and by future trainees themselves. The first is the general feeling by those who did not complete their training that they would have been much better off if they would have completed their course. The second recommendation is that future trainees not enter certain fields because of low wages and inability to acquire a job even after completion of training. There are only a few such fields, and they can be rapidly identified from Table 6-4. The third general criticism made by the respondents is that the Bureau of Indian Affairs' counselors should spend more time in helping a trainee choose a particular training course. While there are many considerations involved in helping an applicant decide his training course, there has apparently not been enough consideration given the desires of the trainee.

The final comment of most of the trainees was that the success or failure of the training rested not with the Bureau of Indian Affairs or the training institution, but with the person, be he white, Indian, or Negro. As Indians speaking of their own people, some of the trainees exhibited a great deal of pride in their race, but indicated that the Indian must change and become more oriented to the world of work before training can become really successful. In this respect, it was encouraging to note almost no hint of racial prejudice against those trainees who had entered the working world of the white man. It appears, therefore, that the door is open for the Oklahoma Indian if he is willing to enter.

Policy Recommendations

The purpose of this final part of the chapter is to present the policy recommendations suggested by the evaluation of adult vocational training received by American Indians through the Muskogee, Oklahoma Area Office of the Bureau of Indian Affairs. Inasmuch as these recommendations are based on an analysis of the trainees of only two areas of the BIA, they should not be extended to other areas. Indeed, the history and problems facing Indians of other areas are so different from the history and problems of Oklahoma Indians that separate evaluations should be made.

The policy recommendations are discussed below. They have not been ranked according to any priority, although it

is obvious that some are more feasible than others.

1. It has been shown that completion of adult vocational training substantially increases the employment rate and monthly income of recipients. Moreover, the social benefits of training far surpass the cost to society. Therefore, it is strongly recommended that the allocation of AVT funds to the Muskogee area be substantially increased so as to train more Indians for productive lives in their communities. It is apparent that qualified trainees exist. A sizeable number of Indians must await training because of lack of program funds.
2. To provide these funds, it is recommended that Congress increase the funds allocated for P. L. 959, and that a sizeable portion of these be directed to the Muskogee area by the BIA. Further, to the extent that the BIA can gauge, existing funds should be directed from areas where there is little demand for AVT to the Muskogee area.
3. Employment assistance personnel in the Muskogee and Anadarko areas should impress upon newly entering trainees the importance of completing training. This study is unable to furnish statistical evidence to demonstrate the exact results of noncompletion, but the comments of questionnaire respondents who did not complete training should be sufficient support for the recommendation.

4. It is recommended that employment assistance personnel in the two areas should attempt to improve their pre-training counseling of trainees. This is particularly true with respect to choice of occupation. It appears that in certain cases, trainees have been diverted from their true interests into occupations where they were unhappy and, as a result, less than fully productive. It is realized that occupational counseling is a difficult and complex task; however, the comments of the respondents also reveal that too many have been pushed into places where they did not want to go.
5. To the extent that a trainee's sole criterion in the selection of an occupation is monetary, then trainees should be urged not to train in certain fields. Among these are (1) building maintenance, (2) furniture upholstery, (3) meat cutting, (4) cosmetology, (5) stenographic, and (6) secretarial. The unadjusted income in all of these occupations averaged less than $250 per month--hardly enough to support a single person, much less a family. This recommendation is supported by the comments of trainees themselves and by the data in Table 6-4.
6. The data in Table 5-5 reveal that the four most popular training courses for females were (1) secretarial training, (2) cosmetology, (3) stenographic training, and (4) business machines operator. Train-

ees in the first three of these occupations made an average of less than $250 per month in income. It is, therefore, recommended that employment assistance personnel in the two areas confront female applicants with these facts and present the alternative of entering a more rewarding occupation. This is not, of course, to say that the wishes of an applicant be changed against her will. Among the alternatives which could be suggested are (1) business machines operator, (2) culinary arts, (3) accounting and/or bookkeeping, (4) licensed practical nurse, and (5) registered nurse. In the first three of these, the average incomes are well above the $250 per month level. The incomes for the remaining two are not known because the trainees were not among the questionnaire respondents, but good approximations can be acquired from other sources such as friends.

7. It is again recommended that employment assistance personnel thoroughly investigate the abnormally high noncompletion rates in (1) auto mechanics and (2) secretarial training. Whatever the causes, these noncompletion rates represent expenditures of considerable time and money on the parts of both the trainees and the BIA. They must be reduced if the greatest economic efficiency in providing training is to be realized.

8. It is recommended that an evaluation of P. L. 959 on-the-job training received by Indians through the Muskogee and Anadarko area offices be conducted as a companion study to the present one. If the gains in income and employment are found to be significantly smaller than in the AVT program, as the BIA personnel believe, then P. L. 959 funds should be diverted from OJT into AVT training to achieve maximum impact on Indian poverty and unemployment. If, on the other hand, the OJT program produces greater returns, then more funds should be allocated to this use. Such an analysis might also examine the "trade-offs" in costs and effectiveness between specific types of OJT and specific AVT curricula.
9. Throughout this evaluation, the points which separate the P. L. 959 training from the other public training programs, such as MDTA, kept growing in importance. These differences are found in the administrative as well as in the training aspects of the programs. Unlike MDTA, for example, there is no recruitment of trainees in AVT training and no minimum enrollment before a course can be offered. Moreover, AVT uses existing training facilities and full-time experienced instructors rather than rapidly erected facilities with part-time instructors. The adult vocational training courses average about eighteen to twenty-four months as compared to

a maximum of fifty-two weeks for MDTA training. On the basis of these differences and the comments of those doing research on MDTA training, it is recommended that a thorough evaluation be conducted comparing the returns of AVT with the returns of various MDTA programs. It is hypothesized that the gain in trainee income per dollar cost of training of the AVT program will be found to substantially exceed that of many MDTA programs. If this is so, then the other public manpower programs should be reevaluated in light of the longer experience in manpower training of the Bureau of Indian Affairs.

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APPENDIX A

APPLICATION FOR DIRECT EMPLOYMENT ASSISTANCE, ON-THE-JOB TRAINING, AND ADULT VOCATIONAL TRAINING

Form 5-440
(Rev. June 1962)

Bureau of Indian Affairs
Branch of Employment Assistance

EMPLOYMENT ASSISTANCE INFORMATION RECORD

AREA AGENCY AGENCY FILE NO. DESTINATION FILE NO. AND DATE	☐ INITIAL REQUEST ☐ REPEAT 1 2 3 (Circle)	TYPE OF SERVICE ☐ Employment Assistance (1780) ☐ Institutional Training (1785) ☐ On-the-job-Training (1785) ☐ Other

1. NAME OF APPLICANT (Last, First, Middle)	2. Also known as:
3. MAILING ADDRESS:	4. LOCATION OF RESIDENCE:

5. SEX M ☐ F ☐	6. MARITAL STATUS M ☐ S ☐ W ☐ D ☐ SEP. ☐	7. DATE OF MARRIAGE	8. DEGREE OF INDIAN BLOOD	9. SOCIAL SECURITY NO.

10. Height	11. Weight	12. Religious Affiliation	13. Draft Status - if 4F, explain

14. Members of Household or Dependents; a. Those Accompanying Applicant:

Name	Tribe	Relationship	Birth Date	Birthplace	Grade Completed	Remarks
(1) Applicant:		X X X X				
(2)						
(3)						
(4)						
(5)						
(6)						
(7)						
(8)						
b. Those Not Accompanying Applicant:						
(1)						
(2)						
(3)						
(4)						

15. Give Name, Address, and Relationship of Relatives or Close Friends Living at or near Destination:

16. Give Name, Address, and Relationship erson Who Should be Notified in Case of Emergenc:

Form 5-440-2
(Rev. June 1962)

EMPLOYMENT ASSISTANCE INFORMATION RECORD

APPLICANT

17. KNOWLEDGE OF ENGLISH:

a. Applicant (Worker)

	Good	Fair	Poor	None
Speaking				
Reading				
Understanding				

b. Spouse (Wife)

	Good	Fair	Poor	None
Speaking				
Reading				
Understanding				

18. PREVIOUS EXPERIENCE LIVING OFF RESERVATION:

a. Applicant

Location	Months

b. Spouse

Location	Months

c. Residence Past 12 Months: (If more than one -- list in Item 33)

(1) Address

(2) Date Moved In

(3) Rent Paid Per Month $

(4) Utilities Included Yes No

(5) Landlord's Name & Address

19. RESOURCES AND OBLIGATIONS AT RESERVATION:

Type (Describe)	Value	Debts	Type Payments	Future Use-Remarks
a. Land (Applicant)				
b. Land (Spouse)				
c. House				
d. Furniture and Household Goods				
e. Other				

20. CONTINUING INCOME: (Detail in Item 33 if Necessary)

Type (Describe)	Total Per Year	Payments	Future Use-Remarks
a. Land Lease (Applicant)			
b. Land Lease (Spouse)			
c. Other			
d. Per Capita (All Family)			

21. INCOME PAST 12 MONTHS: (Include Unemployment Compensation, Welfare, and Other Sources)

Source or Employer	Address	No. Months	Amount
a.			
b.			
c.			
d.			

22. PHYSICAL RESTRICTIONS AFFECTING EMPLOYMENT: Yes No If Yes, Explain:

23. INTERESTS, HOBBIES, AND LEISURE TIME ACTIVITIES:

GPO 856968

Form 5-440-3
(Rev. July 1967)

EMPLOYMENT ASSISTANCE INFORMATION RECORD
APPLICANT

24. UNION MEMBER:

Yes ☐ No ☐ Formerly ☐ Local No. Group Address

25. DOES APPLICANT HAVE

	Yes	No	Type	Condition or Status
a. Tools				
b. License				
c. Car				

26. EDUCATION:

Schools Attended	Encircle Highest Grade Completed	Name and Location of School	Degree or Certificate	Date (Year)
Public	1 2 3 4 5 6 7 8 9 10 11 12			
Indian (Federal)	1 2 3 4 5 6 7 8 9 10 11 12			
Mission	1 2 3 4 5 6 7 8 9 10 11 12			
College	1 2 3 4			
Other (Not Mentioned in No. 28)				

27. TEST SCORES (GED Level, GATB, Other)

28. VOCATIONAL TRAINING OR SPECIAL TRAINING:

Name of Course Taken	Date Began	Date Completed	Time Attended	Certificate or Diploma	Under P.L. 959 Yes	Under P.L. 959 No

29. MILITARY RECORD:

Branch of Service	Service Number	Date Entered	Date Discharge	Type of Discharge

Claim Number	Service-Connected Disability ☐ Yes ☐ No	Disability Allowed	Compensation $_____ per Month

Special Military Courses and/or Skills Acquired While in Military Service:

30. WORK PREFERENCE:

Type	Reason for Desiring This Work	Years Experience
a.		
b.		
c.		

31. SPECIAL SKILLS:

Type	Machines or Equipment or Tools Operated	Years Experience Work	Years Experience School
a.			
b.			
c.			

Form 5-440-4
(Rev. July 1967)

EMPLOYMENT ASSISTANCE INFORMATION RECORD
APPLICANT

32. EMPLOYMENT RECORD: (Account for Last 10 Years or Since Completion of School)

From:	Employer	Employer's Address
To:	Job Title	Description of Work
No. of Months:	Reason for Leaving	
Wage: $ per		
From:	Employer	Employer's Address
To:	Job Title	Description of Work
No. of Months:	Reason for Leaving	
Wage $ per		
From:	Employer	Employer's Address
To:	Job Title	Description of Work
No. of Months:	Reason for Leaving	
Wage: $ per		
From:	Employer	Employer's Address
To:	Job Title	Description of Work
No. of Months:	Reason for Leaving	
Wage: $ per		
From:	Employer	Employer's Address
To:	Job Title	Description of Work
No. of Months:	Reason for Leaving	
Wage: $ per		

(Form 5-440-4a EMPLOYMENT RECORD (Continuation Sheet) is available for additional entries.)

33. GENERAL COMMENTS:

GPO 836-638

Form 5-440-5
(Rev. July 1967)

EMPLOYMENT ASSISTANCE INFORMATION RECORD

APPLICANT

34. EMPLOYMENT ASSISTANCE PLAN AND HOW FAMILY OR INDIVIDUAL PLANS TO IMPLEMENT IT:

35. CHECK LIST OF IMPORTANT DOCUMENTS:

Document	Yes	No	Attached	Will Carry	Action Taken
a. Birth Certificate (s)					
b. Discharge Papers					
c. School Records					
d. Draft Registration Card					
e. Social Security Card					
f. Marriage Certificate					
g. Driver's License					

36. REMARKS:

Date

Signature of Applicant

Form 5-440-6
(Rev. July 1967)

EMPLOYMENT ASSISTANCE INFORMATION RECORD
APPLICANT

AGENCY EMPLOYMENT ASSISTANCE OFFICER'S EVALUATION OF APPLICANT AND FAMILY

37. APPRAISAL

a. Arrest Record: (Chronological Order)

Location	On or Off Reservation	Type of Offense	Disposition	Date	Remarks

b. Social Problems Bearing on Adjustment at Destination:

c. Appraisal of Education and Work Experience:

d. Problems that May be Encountered Pertaining to Physical Conditions:

e. Personal Characteristics (Check one Adjective Rating for Each Characteristic):

Characteristic	Outstanding	Acceptable	Poor	Characteristic	Outstanding	Acceptable	Poor
Appearance and Manner				Resourcefulness and Initiative			
Voice and Speech				Self-confidence			
Responsiveness and Alertness				Friendliness and Tact			
Purpose and Sustained Interest				Cooperation and Teamwork			
Analysis and Judgment				Responsibility			
Planning				Attitude			

f. General Appraisal with Detailed Information on Items Not Elsewhere Covered:

38.

Date

Signature of Agency Employment Assistance Officer

GPO 836-838

Form 5-440-7
(Rev. July 1967)

EMPLOYMENT ASSISTANCE INFORMATION RECORD

APPLICANT

INSTITUTIONAL TRAINING PLAN
(To be Completed Only When Applicant Applies for Institutional Training)

39. INSTITUTIONAL TRAINING OBJECTIVES (TENTATIVE):

Course	Course
a.	c.
b.	d.

40. EMPLOYMENT OBJECTIVES (TENTATIVE):

a.

b.

41. DETAILED PLAN: (SET FORTH AND EXPLAIN IN DETAIL)

a. Selected Training Location;

b. Employment and Residence Location Desired:

c. How Training is Expected to Help:

42. THE ABOVE INSTITUTIONAL TRAINING PLAN HAS BEEN DISCUSSED WITH THE APPLICANT WHO MEETS THE ELIGIBILITY REQUIREMENTS. THE APPLICANT (IS) (IS NOT) RECOMMENDED FOR TRAINING.

Date

Agency Employment Assistance Officer

Form 5-440-8
(Rev. July 1967)

EMPLOYMENT ASSISTANCE INFORMATION RECORD
APPLICANT

43. SPACE FOR ADDITIONAL INFORMATION:

GPO 836-836

APPENDIX B

BASIC DATA FORM

PRE-TRAINING DATA

CARD #_____ OK MU #_____

DATE OF APPLICATION_____ AGENCY SUBMITTING_____

1. Name (last, first, middle)_____

2. Present Address_____

_____

3. Mailing Address (application)_____

_____

4. Mailing Address of Closest Relative_____

_____

_____

5. Indication as to Present Address (application)_____

_____

6. Sex: M F 7. Birth Date: ___/___/___

8. Tribe_____ 9. Degree Indian Blood_____

10. Marital Status: M S W D SEP 11. Number of Children_____

12. Number of children residing in household_____

13. Members of Household in Addition to Applicant, Spouse, and Children:

	Applicant	Spouse
Mother of		
Father of		
Brother(s) ( ) of		
Sister(s) ( ) of		
Grandmother of		
Grandfather of		
Other (specify)		

14. Applicant's Knowledge of English:

Speaking	Good	Fair	Poor	None
Reading				
Understanding				

15. Estimated Value of Resources Owned

Land (Applicant) $_____

Land (Spouse) $_____

House $_____

Furniture and Household Goods $_____

Automobile $_____

Other (specify)_____ $_____

16. Number of Years of School Completed by Type of School

Public_____

Indian (federal)_____

Mission_____

College_____

Other (specify)_____ _____

17. Highest Level of Education Completed and Type of School Providing

School_____ Grade_____

18. Applicant Graduated from High School: Yes No

19. Number of Months that Applicant was in the Labor Force during Previous _____ Years. _____ Months

20. Number of Months that Applicant was Employed During Period in Labor Force. _____ Months

21. Percentage of Time Employed While in Labor Force.

_____ per cent

22. Number of Different Employers While in Labor Force.

_____

23. Maximum Estimate of Total Income Earned while Employed.

$_____

24. Average Monthly Income Earned while Employed.

$_____

25. Applicant's Total Income for 12 Months Immediately Prior to Training

Earned $_____

Unemployment Compensation $_____

Welfare $_____

Other (specify) _____ $_____

26. Personal Characteristics:

Characteristic	Outstanding	Acceptable	Poor
Appearance & Manner			
Voice & Speech			
Responsiveness & Alertness			
Purpose & Sustained Interest			
Analysis & Judgment			
Planning			
Resourcefulness & Initiative			
Self-Confidence			
Friendliness & Tact			
Cooperation & Teamwork			
Responsibility			
Attitude			

27. Employment and Residence Location Desired Following Training

Oklahoma _____

Other (Specify) _____

28. Total Amount of Welfare Received Directly by Applicant During Previous _____ Years.

Public $_____

BIA $_____

Tribal $_____

29. Total Amount of Welfare Received Indirectly (via parents, etc.) by Applicant During Previous _____ Years.

Source	Amount
Applicant's Parents	$
Spouse'e Parents	$
Other (specify)	$

TRAINING DATA

1. Had Trainee Received any Previous Vocational Training:
   Yes No
2. If Yes above, was it: Private Military
   Other (specify)_____
3. Occupation for which 959 Training was Received_____
4. Length of course: _____Months.
5. Location of Training. _____
6. Date of Commencement of Training____/____/____
7. Age of Trainee at Commencement _____ years.
8. Date of Termination of Training ____/____/____
9. Number of Years Pre- and Post-Training Covered
   _____ Years.
10. Training was Completed Not Completed
11. Number of months Completed _____.
12. Per cent of Training Completed _____ per cent.
13. If Training not completed was because of
    A. desire to seek work - was employed in short period
    B. desire to seek work - was not employed in short period
    C. trainee's discipline and misconduct (specify)
       1. absences
       2. alcohol
       3. law violation
       4. other (specify) _____
    D. lack of progress and interest
    E. illness of trainee
    F. family illness or problems
    G. personal problems
    H. marriage of trainee
    I. unknown reasons
14. GATB test scores

G	_____	Q	_____
V	_____	K	_____
N	_____	F	_____
S	_____	M	_____
P	_____		

15. Was Occupation for Which Training Received Recommended by GATB scores: Yes No

15. If Yes to above, what specific tests of GATB used to determine OAP

G V N S P Q K F M

17. Summation of scores for tests circled above. _____ points

18. Members of Trainee's Household Accompanying Trainees to Training Location

	Trainee	Spouse
Father		
Mother		
Brother		
Sister		
Other (specify)		

19. Total Cost of Training by Major Component

A. Tuition, books, tools, etc. $_____

B. Subsistence of trainee and dependents $_____

C. Other (specify) _____ $_____

Total $_____

POST-TRAINING DATA

1. Data from: Questionnaire Interview

2. Age of Trainee: _____

3. Marital Status: M S W D SEP

4. Number of Children _____.

5. Number of children residing in household _____.

6. Members of Household in Addition to Trainee, Spouse, and Children

	Trainee	Spouse
Mother of		
Father of		
Brother(s) ( ) of		
Sister(s) ( ) of		
Grandmother of		
Grandfather of		
Other (specify)		

7. Estimated Value of Resources owned
   Land (trainee) $_____
   Land (spouse) $_____
   House $_____
   Furniture and Household Goods $_____
   Automobile $_____
   Other (specify _____ $_____

8. Number of Months that Trainee was in the labor force during previous _____ Years. _____ Months

9. Number of months that trainee was employed during period in labor force. _____ Months

10. Number of months that trainee was employed in an occupation related to training during period in labor force. _____ Months

11. Percentage of time employed while in labor force for
    Total period employed _____ per cent
    While employed in Occupation related to training _____ per cent

12. Number of different employers while in labor force _____

13. Maximum estimate of total income earned while employed $_____

14. Maximum estimate of total income earned while employed in training-related occupation $_____

15. Average Monthly income for
    Total Period Employed $_____
    Period Employed in Training-Related Occupation $_____

16. Total amount of welfare received directly by trainee during previous _____ years
    Public $_____
    BIA $_____
    Tribal $_____

17. Total amount of welfare received indirectly (via parents, etc.) by trainee during previous _____ years

Source	Amount
Trainee's parents	
Spouse's parents	
Other (specify)	

18. General Assessment of Training

A. of great advantage to trainee

B. of questionable or uncertain advantage

C. of no advantage - a waste of time

19. Recommendations.

APPENDIX C

LETTER SENT TO NEXT-OF-KIN REQUESTING THE CURRENT ADDRESSES OF THE TRAINEES

April 17, 1967

PERSONAL AND CONFIDENTIAL

Mr. and Mrs. Perry Smith[1]
1501 E. 10th
Seminole, Oklahoma

Dear Mr. and Mrs. Smith:

Beginning in 1958, your son John received vocational training through the Bureau of Indian Affairs. As a graduate student at Oklahoma State University doing research on an advanced degree, I want to find out if this training helped John and how he thinks it can be improved.

In order to find out whether this training has helped, I have to get in contact with John. So far I have been unable to locate him and would very much appreciate your help.

If you know John's address, please write it on the enclosed card and mail it in the enclosed envelope. The envelope requires no stamp and is already addressed to me at the University. If the name has been changed, please write the new name above the old one on the card. Even if you do not know the address, I would appreciate your checking the box on the card marked "Address Unknown" and mailing it so that I may keep my records straight.

Let me assure you that the address will be confidential and it will be used only for my research.

I will appreciate any information which you can provide.

Respectfully,

Paul Blume

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[1]The names of the next-of-kin and the trainee are fictitious and are used only as examples.

APPENDIX D

POST-TRAINING DATA QUESTIONNAIRE

CONFIDENTIAL

Vocational Training Questionnaire for American Indians

Name _____

1. Are you now:
   - ☐ Married?
   - ☐ Single?
   - ☐ Widowed?
   - ☐ Divorced?
   - ☐ Separated?

2. How many children do you have (your own and those by marriage, adoption, etc.)?
   Write the number here _____

3. How many of these children now live with you?
   Write the number here _____

4. Besides these children, who else lives with you in your house? Please check the blanks which apply.
   - ☐ No one—I live by myself
   - ☐ Your husband or wife (in other words, your spouse)
   - ☐ One or both of your parents
   - ☐ One or both of your spouse's parents
   - ☐ Your aunt and/or uncle
   - ☐ Your spouse's aunt and/or uncle
   - ☐ One or both of your grandparents
   - ☐ One or both of your spouse's grandparents
   - ☐ Others such as brothers, sisters, friends, etc.

5. I would like to find out what you have been doing since the end of your training.
   Below is a list of possible activities. Please check all those you have done.
   - ☐ I was a member of the armed services on active duty
   - ☐ I was employed (other than the armed services)
   - ☐ I was unemployed (I was looking for work but could find none)
   - ☐ I was a full-time student
   - ☐ I was a housewife
   - ☐ I was in the hospital or unable to work because of bad health
   - ☐ I was in jail or the penitentiary
   - ☐ I was (write any other activity that you did) _____

     _____

6. Now that you have checked the kinds of activity since you ended your training, I would like to know more about each kind.
   1. Following is a table made up of a number of small forms to be filled in by you. Each of these forms is the same and is to show when you did each of your activities and something about it.
   2. It is important to account for all of the time from the end of your training in _____ until December 31, 1966. To help you, I have written this date in the first form of the table.
   3. To help you there is a sample page with the forms filled out for different activities. Use this sample page to answer your questions about filling out the form.

SAMPLE

From:	Employer or other type of activity
May, 1960	U.S. ARMY
To:	**Job title:**
May, 1962	SP/4
Wage or Salary	**Did you use any of the things you learned in your training?**
$95 per Month	☐ Yes ☒ No
From:	**Employer or other type of activity**
May, 1962	Unemployed
To:	**Job title:**
July, 1962	
Wage or Salary	**Did you use any of the things you learned in your training?**
$ per	☐ Yes ☐ No
From:	**Employer or other type of activity**
July, 1962	City of Anadarko, Okla
To:	**Job title:**
Nov, 1963	Street Maintenance Worker
Wage or Salary	**Did you use any of the things you learned in your training?**
$1.50 per hour	☐ Yes ☒ No
From:	**Employer or other type of activity**
Nov, 1963	Hospital - operation and recovery
To:	**Job title:**
Feb, 1964	
Wage or Salary	**Did you use any of the things you learned in your training?**
$ per	☐ Yes ☐ No
From:	**Employer or other type of activity**
Feb, 1964	Unemployed
To:	**Job title:**
April, 1964	
Wage or Salary	**Did you use any of the things you learned in your training?**
$ per	☐ Yes ☐ No
From:	**Employer or other type of activity**
April, 1964	Jones Auto Repair
To:	**Job title:**
May, 1966	Auto Mechanic
Wage or Salary	**Did you use any of the things you learned in your training?**
$2.25 per hour	☒ Yes ☐ No
From:	**Employer or other type of activity**
May, 1966	Smith Auto Shop
To:	**Job title:**
Dec 31, 1966	Auto Mechanic
Wage or Salary	**Did you use any of the things you learned in your training?**
$400 per Month	☒ Yes ☐ No

From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No

FORMS ARE CONTINUED ON THE NEXT PAGE

From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No
From:	Employer or other type of activity
To:	Job title:
Wage or Salary $ per	Did you use any of the things you learned in your training? ☐ Yes ☐ No

QUESTIONNAIRE CONTINUED ON BACK PAGE

7. Which of the following statements best expresses your opinion about the training you received?

   ☐ It has been of real use to me.

   ☐ It has been of some use to me.

   ☐ It has been of almost no use to me.

8. Do you have any comments about your training? For example: What did you like about your training? What, if anything, didn't you like? How can the training be changed to better help the American Indian? Feel free to write what you want as I will not show this to anyone.

APPENDIX E

LETTER ACCOMPANYING POST-TRAINING DATA QUESTIONNAIRE

May 17, 1967

PERSONAL AND CONFIDENTIAL

Mr. John Smith[1]
1234 E. Main
Dayton, Ohio

Dear Mr. Smith:

Beginning in 1958, you received vocational training through the Bureau of Indian Affairs. Enclosed is a short questionnaire about your training for a study I am doing as a graduage student at Oklahoma State University. I want to find out if your training helped you and if you think it can be changed to better help the American Indian. Therefore, I need a few minutes of your time to help the many hundreds of Indians who will receive this training in the future.

I would appreciate you filling out all of the items on the questionnaire and returning it to me today. To make this as easy as possible, I have enclosed an envelope which requires no stamp and is already addressed to me at the University.

Let me assure you that my research has the approval and full cooperation of the Bureau of Indian Affairs. Also, let me promise you that your questionnaire will be <u>confidential</u> and will not be shown to anyone besides myself.

Respectfully,

Paul Blume

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[1]The name of the trainee is fictitious and is used only as an example.

APPENDIX F

MARITAL STATUS OF THE TRAINEES AT TIME OF APPLICATION FOR TRAINING BY SEX OF THE TRAINEE

Marital Status	Male	Female	Total	Per cent Distribution
Married	228	2	230	34.2
Single	257	138	395	58.8
Widow	--	5	5	.7
Divorced	4	30	34	5.1
Separated	--	3	3	.4
Marital status unknown[b]	4	1	5	.7
Total	493	179	672	100.0[a]

[a]Individual percentages will not total 100% due to rounding.

[b]This results from AVT applications that had been forwarded to other agencies but which could not be located or returned to the Muskogee Area Office for analysis.

APPENDIX G

NUMBER OF CHILDREN OF TRAINEES RESIDING IN TRAINEE'S HOUSEHOLD AT TIME OF APPLICATION BY SEX OF TRAINEE

Number of Children	Male	Female	Total	Per cent Distribution
None	314	133	447	66.5
1	71	17	88	13.1
2	39	18	57	8.5
3	24	3	27	4.0
4	21	2	23	3.4
5	10	3	13	1.9
6	5	--	5	.7
7	1	2	3	.4
8	2	--	2	.3
9	--	--	--	--
10	1	--	1	.1
Number unknown[b]	5	1	6	.9
Total	493	179	672	100.0[a]

[a]Individual percentages will not total 100% due to rounding.

[b]This results from AVT applications that had been forwarded to other agencies but which could not be located or returned to the Muskogee Area Office for analysis.

APPENDIX H

TRIBAL AFFILIATION OF THE TRAINEES BY SEX OF THE TRAINEE

Tribe	Male	Female	Total	Per cent Distribution
Five Civilized Tribes				
Cherokee	114	35	149	22.2
Creek	61	19	80	11.9
Choctaw	48	29	77	11.5
Chickasaw	6	4	10	1.5
Seminole	22	5	27	4.0
Creek-Seminole	9	3	12	1.8
Creek-Cherokee	6	--	6	.9
Choctaw-Chickasaw	2	1	3	.4
Choctaw-Cherokee	--	1	1	.1
Creek-Choctaw	--	1	1	.1
Sub total	268	98	366	54.5[a]
Remainder				
Pawnee	11	5	16	2.4
Apache	3	1	4	.6
Arapaho	5	2	7	1.0
Caddo	6	2	8	1.2
Cheyenne	9	2	11	1.6
Cheyenne-Arapaho	13	2	15	2.2
Comanche	12	6	8	1.2
Delaware	--	1	1	.1
Kickapoo	4	--	4	.6
Kiowa	47	12	59	8.8
Kiowa-Apache	3	--	3	.4
Osage	7	2	9	1.3
Ponca	17	6	23	3.4
Potawatami	1	1	2	.3
Quapaw	1	1	2	.3
Sac & Fox	9	4	13	1.9
Seneca	3	--	3	.4
Wichita	3	1	4	.6
Kiowa-Cherokee	2	1	3	.4
Potawatami-Sac & Fox	--	1	1	.1

APPENDIX H (Continued)

Otoe	7	6	13	1.9
Pawnee-Quapaw	1	--	1	.1
Pawnee-Otoe	1	--	1	.1
Pawnee-Cheyenne	1	--	1	.1
Kiowa-Comanche	4	2	6	.9
Pawnee-Ponca	1	--	1	.1
Pawnee-Comanche	1	--	1	.1
Seneca-Cayuga-Quapaw	1	--	1	.1
Choctaw-Comanche	1	--	1	.1
Delaware-Wichita	1	--	1	.1
Mohawk	1	--	1	.1
Kiowa-Araphao	1	--	1	.1
Kiowa-Delaware	--	1	1	.1
Caddo-Delaware	4	--	4	.6
Shawnee	15	1	16	2.4
Pawnee-Wichita	--	1	1	.1
Caddo-Comanche	1	--	1	.1
Shawnee-Kickapoo	1	--	1	.1
Sioux	--	1	1	.1
Delaware-Sac & Fox	--	1	1	.1
Pawnee-Iowa	1	1	2	.3
Ponca-Omaha	1	--	1	.1
Euchee-Sac & Fox	1	1	2	.3
Iowa-Otoe	1	--	1	.1
Mojave	1	--	1	.1
Pawnee-Sad & Fox	1	--	1	.1
Potawatami-Seminole	1	--	1	.1
Shawnee-Cherokee	2	1	3	.4
Kiowa-Chickasaw	1	--	1	.1
Wyandotte-Shawnee	1	--	1	.1
Otoe-Creek	1	--	1	.1
Cherokee-Apache	--	1	1	.1
Otoe-Comanche	--	2	2	.3
Osage-Otoe	1	--	1	.1
Pawnee-Creek	1	--	1	.1
Ponca-Potawatami	--	1	1	.1
Tonkawa-Potawatami	1	--	1	.1
Omaha	2	--	2	.3
Winnebago-Seneca-Cayuga	1	--	1	.1
Seneca-Cayuga	1	--	1	.1
Kaw-Ponca	1	--	1	.1
Shawnee-Potawatami	--	1	1	.1
Kiowa-Ponca	--	2	2	.3
Osage-Creek	1	--	1	.1
Winnebago	--	2	2	.3
Oneida-Wyandotte	--	1	1	.1
Otoe-Ponca	1	1	2	.3
Wyandotte	1	--	1	.1
Kickapoo-Arapaho	1	--	1	.1
Seminole-Kickapoo	--	1	1	.1

APPENDIX H (Continued)

Caddo-Shawnee	--	1	1	.1
Euchee-Apache-Shawnee	1	--	1	.1
Caddo-Wichita	--	1	1	.1
Cherokee-Osage	--	1	1	.1
Affiliation unknown[b]	2	--	2	.3
Total	225	81	306	45.5[a]

[a]The sum of the per cent figures will not total 54.5% and 45.5% due to rounding.

[b]This results from AVT applications that had been forwarded to other agencies but which could not be located or returned to the Muskogee Area Office for analysis.

APPENDIX I

DEGREE INDIAN BLOOD OF THE TRAINEES BY SEX OF THE TRAINEE

Degree Indian Blood	Male	Female	Total	Per cent Distribution
Full-blood	225	72	297	44.2
Over 3/4 but less than full	44	9	53	7.8
3/4	36	14	50	7.4
Over 1/2 but less than 3/4	12	10	22	3.0
1/2	88	38	126	18.7
Over 1/4 but less than 1/2	52	17	69	10.1
1/4	33	18	51	7.6
Degree of blood unknown[b]	3	1	4	.6
Total	493	179	672	100.0[a]

[a]Individual percentages will not total 100% due to rounding.

[b]This results from AVT applications that had been forwarded to other agencies but which could not be located or returned to the Muskogee Area Office for analysis.

APPENDIX J

DISTRIBUTION OF THE TRAINEES BY FISCAL YEAR OF APPLICATION FOR TRAINING AND BY SEX OF THE TRAINEE

Fiscal Year	Male	Female	Total	Per cent Distribution
1958	43	1	44	6.5
1959	62	15	77	11.5
1960	52	4	56	8.3
1961	43	18	61	9.1
1962	76	25	101	15.0
1963	48	26	74	11.0
1964	81	27	108	16.1
1965	62	38	100	14.9
1966	26	25	51	7.6
Total	493	179	672	100.0

APPENDIX K

DISTRIBUTION OF THE TRAINEES BY THE AREA AND AGENCY INITIATING THE APPLICATION FOR TRAINING AND BY SEX OF THE TRAINEE

Area, Agency	Male	Female	Total	Per cent Distribution
Anadarko area				
Cheyenne-Arapaho Agency	30	5	35	5.2
Kiowa Agency	91	31	122	18.2
Pawnee Agency	55	24	79	11.8
Shawnee Agency	27	13	40	6.0
Sub total	203	73	276	41.2
Muskogee area				
Ardmore Agency	5	6	11	1.6
Choctaw Agency	10	10	20	3.0
Okmulgee Agency	107	30	137	20.4
Quapaw Agency	45	25	70	10.4
Tahlequah Agency	81	17	98	14.6
Talihina Agency	37	15	52	7.7
Wewoka Agency	5	2	7	1.0
Sub total	290	105	395	58.7
Other areas	--	1	1	.1

APPENDIX L

AVERAGE TRAINING AND SUBSISTENCE COST BY OCCUPATION AND BY STATUS OF TRAINING COMPLETION

APPENDIX L (Continued)

Occupation[a]	Training Complete		Training Not Complete	
	Trainees	Average Cost Per Trainee	Trainees	Average Cost Per Trainee
Accounting and/or Bookkeepping	12	$ 4,278.91	5	$ 1,662.80
Airline Service Mechanic	5	5,191.20	5	2,004.80
Auto Body	35	4,917.17	20	2,645.45
Auto Mechanics	31	5,402.35	31	2,264.68
Baking	8	3,644.50	5	1,941.00
Banking & Data Processing	1	1,080.00	--	--
Barber	46	2,082.43	4	651.50
Building Construction	4	5,864.50	3	2,287.67
Building Maintenance	4	1,591.00	--	--
Business Machines Operator	8	1,970.75	9	1,551.22
Commercial Art	1	6,428.00	3	3,031.67
Cosmetology	53	1,220.30	11	441.45
Culinary Arts	15	4,005.93	2	1,851.50
Diesel Mechanics	37	5,168.35	16	2,196.81
Drafting	24	4,591.50	16	2,736.06
Dry Cleaning	18	3,659.33	15	1,954.40
Electronic Engineering Technician	3	4,409.33	2	1,984.50
Furniture Upholstery	4	2,473.00	1	689.00
Industrial Electrical Maintenance	12	5,132.50	4	3,146.00
Industrial Electronics	20	5,095.55	13	2,615.77
Letterpress Printing	3	3,834.00	3	1,387.33
Licensed Practical Nurse	1	154.00[b]	--	--
Lithography Printing	22	3,997.41	7	1,445.86
Master Instrument Mechanic	2	5,509.50	2	1,911.00
Meat Cutting	7	655.86	--	--
Refrigeration & Air Conditioning	16	4,689.00	5	2,978.60
Secretarial	33	2,501.70	43	1,579.98

Stenographic	6	2,104.67	3	1,817.33
Television Electronics	7	6,231.14	4	2,700.00
X-Ray Technician	1	505.00	1	383.00

[a]No Indians received training as appliance repairmen or as registered nurses although these courses were available through the Muskogee Area Office.

[b]This is the contribution of the BIA. About 90% of the training cost was paid by the individual.

APPENDIX M

TOTAL TRAINING AND SUBSISTENCE COST BY OCCUPATION AND BY STATUS OF TRAINING COMPLETION

APPENDIX M (Continued)

Occupation[a]	Status of Training Completion	
	Complete	Not Complete
Accounting and/or Bookkeeping	$ 51,346.92	$ 8,314.00
Airline Service Mechanic	25,956.00	10,024.00
Auto Body	172,100.95	52,909.00
Auto Mechanics	172,875.20	70,205.08
Baking	29,156.00	9,705.00
Banking & Data Processing	1,080.00	--
Barber	95,791.78	2,606.00
Building Construction	23,458.00	6,863.01
Building Maintenance	6,364.00	--
Business Machines Operator	15,766.00	13,960.98
Commercial Art	6,428.00	9,095.01
Cosmetology	64,675.90	4,855.95
Culinary Arts	60,088.95	3,703.00
Diesel Mechanics	191,228.95	35,148.96
Drafting	110,196.00	43,776.96
Dry Cleaning	65,867.94	29,316.00
Electronic Engineering Technician	13,227.99	3,969.00
Furniture Upholstery	9,892.00	689.00
Industrial Electrical Maintenance	61,590.00	12,584.00
Industrial Electronics	101,911.00	34,005.01
Letterpress Printing	11,502.00	4,161.99
Licensed Practical Nurse	154.00	--
Lithography Printing	87,943.02	10,121.02
Master Instrument Mechanic	11,019.00	3,822.00
Meat Cutting	4,591.02	--
Refrigeration & Air Conditioning	75,024.00	14,893.00
Secretarial	82,556.10	67,939.14

Stenographic	12,628.02	5,451.00
Television Electronics	43,617.98	10,800.00
X-Ray Technician	505.00	383.00
Total	$1,608,541.72	$469,302.10

[a]No Indians received training as appliance repairmen or as registered nurses although these courses were available through the Muskogee Area Office.

APPENDIX N

METHODOLOGY FOR ADJUSTMENT OF LABOR FORCE ATTACHMENT RATES

The only variable for which adjustment of the labor force attachment rates can be made is that of age (see text, Chapter VI). The purpose of the adjustment is to remove the effect of the increased post-training age of a trainee on his labor force attachment rate.

The first step is to regress the pre-training labor force attachment rate of each trainee with his age. The simple linear regression equation is the following: labor force attachment rate (%) = -40 + 3.9 (age). The 3.9 regression coefficient is statistically significant at the .001 level.

The next step in the procedure is to compute the average age of <u>each</u> trainee during both the pre- and post-training periods of evaluation. Let X_1 be the average age during the pre-training period and X_2 be the average age during the post-training period. Each of these average ages is used in the regression equation to predict the average labor force attachment rates during both time periods based only on age. Letting Y_1 be the average attachment rate for an individual trainee during the pre-training period and Y_2 that during the post-training period, their algebraic computation is

shown below:

$$Y_1 = -40 + 3.9\ (X_1)$$

$$Y_2 = -40 + 3.9\ (X_2)$$

The final step is to divide Y_1 by Y_2 for <u>each</u> trainee and then multiply this result by his post-training labor force attachment rate. This deflates the post-training rate and thus eliminates the effect of the increase in age of the trainee that occurred since the pre-training period. It should be emphasized that this procedure is performed for <u>each</u> trainee.

APPENDIX O

METHODOLOGY FOR ADJUSTMENT OF EMPLOYMENT RATES

The purpose of adjusting employment rates is to eliminate the effect of the different levels of aggregate economic activity during the two evaluation periods. The procedure chosen for this adjustment is the use of an index number which measures the effect of the different levels of economic activity during the two periods on employment. The index number is then multiplied by the number of months that a trainee was employed during the post-training period.

The ideal adjustment measure of the effect of the level of economic activity on employment would be the annual employment of Indians in Oklahoma. The statistics for such a measure, however, are not available so another measure was selected. This measure is the annual per cent unemployment of the United States' nonwhite population aged 14 years and over. Let this annual per cent employment figure be denoted by X_t where t is the year of the statistic.

The first step in the construction of the adjustment index is to compute the average annual national per cent unemployment of the nonwhite population during both the pre- and post-training time periods of each trainee. Let $\bar{X}_{t_1 * t_2}$ represent this figure for the pre-training period where t_1 and

t_2 are the beginning and ending years, respectively, of the pre-training period of each trainee. As an example, if the pre-training period for a particular trainee was from 1956 to 1962, then the average annual per cent unemployment during the period would be denoted by $\bar{X}_{1956*1962}$. It should be emphasized that t_2 is the final year of the period and is, therefore, always larger than the beginning year t_1.

The algebraic symbol for the average annual per cent unemployment during the post-training period of a trainee is $\bar{X}_{t_3*t_4}$ where t_3 and t_4 are the beginning and ending years, respectively, of the period. As an example, if the post-training period for a particular trainee runs from 1961 to 1966, then the average annual per cent unemployment would be denoted by $\bar{X}_{1961*1966}$. Because t_4 is the last year of the period, it always exceeds t_3.

The average annual per cent unemployment figures for each period is computed by summing the annual per cent unemployment figures for each of the years during the period and then dividing by the number of years in the period. This is algebraically represented below.

$$\bar{X}_{t_1*t_2} \text{ (pre-training period)} = \frac{\sum_{t=t_1}^{t_2} X_t}{(t_2 - t_1) + 1}$$

$$\bar{X}_{t_3*t_4} \text{ (post-training period)} = \frac{\sum_{t=t_3}^{t_4} X_t}{(t_4 - t_3) + 1}$$

The final step is to construct the adjustment index for each trainee and multiply it by the number of months that

the trainee was employed during the post-training period. If the index is represented by I_{e_n}, where n refers to a particular trainee, it is computed by dividing the post-training average annual per cent unemployment of each trainee by the pre-training average annual figure for the same trainee. The post-training figure is the dividend because there is an inverse relationship between unemployment and the level of economic activity. That is, if the average annual per cent unemployment rate during the post-training period exceeds that during the pre-training period, this signifies that employment possibilities during the post-training period were actually worse than during the pre-training period. Adjustment of the post-training figure would require an <u>increase</u> to make it comparable with the higher pre-training level. An index of greater than one would produce the desired adjustment and this would result only if the post-training unemployment rate were divided by the pre-training rate. The algebraic calculation of the index is below.

$$I_{e_n} = \frac{\bar{X}_{t_3 * t_4}}{\bar{X}_{t_1 * t_2}}$$

If E_{B_n} represents the number of months that trainee n was employed <u>before adjustment</u> during the post-training period and E_{A_n} is the total months employed during the same period <u>after adjustment</u>, then $E_{A_n} = E_{B_n}(I_{e_n})$. It should be again emphasized that E_{A_n} is calculated for <u>each</u> trainee.

APPENDIX P

METHODOLOGY FOR ADJUSTMENT OF AVERAGE MONTHLY EARNED INCOME

The method chosen to adjust average monthly earned income for differences in the level of aggregate economic activity between the pre- and post-training periods is basically the same as that for employment, the use of an index. This index should measure the effect of the different levels of economic activity during the two evaluation periods on income.

The measure used to judge the effect of the level of aggregate economic activity on income was chosen on the basis of the data presented in Appendix Q. This table shows the per cent distribution of employed Indians by industry division for Indian Areas in Oklahoma. It can be assumed from this table that an average Oklahoma Indian who did not have training would most likely to found in either (1) agriculture, (2) services, (3) wholesale or retail trade, or (4) construction. It was, therefore, decided to use an annual average of the per capita wages and salaries paid in these four industries as a measure of the effect on income of aggregate economic activity.

If y_t represents the annual average of the per capita wages and salaries paid in the four industries during any

year t, then it is calculated as follows:

Let: F_t = wages and salaries paid in Oklahoma in the farm sector during year t

CC_t = wages and salaries paid in Oklahoma in the contract construction industry during year t

WRT_t = wages and salaries paid in Oklahoma in wholesale and retail trade during year t

S_t = wages and salaries paid in Oklahoma in the services industry during year t

EF_t = Oklahoma farm laborers in year t

ECC_t = Oklahoma employment in contract construction in year t

$EWRT_t$ = Oklahoma employment in wholesale and retail trade in year t

ES_t = Oklahoma employment in services in year t

Then:
$$y_t = \frac{\left(\frac{F_t}{EF_t} + \frac{CC_t}{ECC_t} + \frac{WRT_t}{EWRT_t} + \frac{S_t}{ES_t}\right)}{4}$$

Once the annual per capita wages and salaries figures are computed, the rest of the procedure is identical to that used in construction of the employment index. The first step is to compute the average annual per capita wages and salaries figure during both the pre- and post-training time periods of each trainee. Let $\bar{Y}_{t_1 * t_2}$ represent this figure for the pre-training period beginning in year t_1 and ending in year t_2. As in the case of the employment notation, t_2 always exceeds t_1.

The algebraic symbol for the average annual per capita wages and salaries paid in the four industries during the post-training period beginning in year t_3 and ending in year

t_4 is $\bar{Y}_{t_3 * t_4}$. Again, t_4 exceeds t_3.

These annual averages for both training periods are computed by summing the previously determined yearly industry averages for each year in the period and then dividing by the number of years in the period. This is algebraically represented below:

$$\bar{Y}_{t_1 * t_2} \text{ (pre-training period)} = \frac{\sum_{t = t_1}^{t_2} y_t}{(t_2 - t_1) + 1}$$

$$\bar{Y}_{t_3 * t_4} \text{ (post-training period)} = \frac{\sum_{t = t_3}^{t_4} y_t}{(t_4 - t_3) + 1}$$

The final step is to construct the index for each trainee and multiply it by the total income of the trainee during the post-training period. Let the index be represented by I_{y_n}, where n refers to an individual trainee. It is computed by dividing the pre-training average annual per capita wages and salaries figure by the annual average wages and salaries during the post-training period. This is shown below:

$$I_{y_n} = \frac{\bar{Y}_{t_1 * t_2}}{\bar{Y}_{t_3 * t_4}}$$

If Y_{B_n} is the total earned income of trainee n during the post-training period <u>before adjustment</u> and Y_{A_n} represents this income <u>after adjustment</u>, then $Y_{A_n} = Y_{B_n} (I_{y_n})$. Again, it should be emphasized that Y_{A_n} is computed for <u>each</u> trainee.

APPENDIX Q

PER CENT DISTRIBUTION OF EMPLOYED INDIANS BY INDUSTRY DIVISION FOR INDIAN AREAS IN OKLAHOMA IN 1960

APPENDIX Q (Continued)

Industry	Indian Areas[a]			
	Clinton-Shawnee	Lawton	Tahlequah	Talihina
Agriculture, Forestry, and Fisheries	22.5	17.1	18.9	15.0
Mining	1.1	3.1	0.7	1.5
Construction	10.8	10.2	10.5	6.4
Manufacturing	12.5	5.7	8.7	18.3
Transportation, Communications, and Public Utilities	3.6	3.3	5.9	5.4
Wholesale & Retail Trade	16.7	16.1	12.8	12.5
Finance, Insurance, and Real Estate	0.5	0.4	1.0	0.4
Services	19.6	25.8	26.4	31.9
Public Administration	7.9	11.0	5.7	4.2
Industry not reported	4.8	7.3	9.4	4.4
Total	100.0	100.0	100.0	100.0

[a]An Indian Area is comprised of counties having 2,500 or more Indians who are relatively homogeneous with respect to tribal and cultural affiliations. For a complete definition and list of counties in each area see pp. 15-16 of the source.

Source: Indians in Oklahoma, Oklahoma Employment Security Commission, September, 1966, p. 31.

APPENDIX R

SUMMARY OF REGRESSION ANALYSIS OF INCOME AND EMPLOYMENT

The multiple regressions were performed using the Doolittle procedure to eliminate nonsignificant variables from the original set of independent variables in order to find a subset of variables to predict the dependent variable.

The regression equation using income is as follows:

$$\hat{Y} = 88.76 + .804^{*} X_1 + 3.07^{*} X_2 - 2.775^{*} X_3 - 18.98^{*} X_4$$

where

Y = post adjusted average monthly income - pre average monthly income

X_1 = per cent of training completion

X_2 = highest level of education

X_3 = age

X_4 = sex where $X_4 = -1$ if male, $X_4 = +1$ if female

The regression equation using employment is as follows:

$$\hat{e} = .254 + .00528^{**} X_1 - .0165^{**} X_2$$

where

e = post adjusted per cent employment - pre per cent employment

X_1 = months in the labor force during the post-training period

X_2 = years of public school

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* Significant at the 10 per cent level.

** Significant at the 1 per cent level.

VITA

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Candidate for the Degree of

Doctor of Philosophy

Thesis: AN EVALUATION OF INSTITUTIONAL VOCATIONAL TRAINING RECEIVED BY AMERICAN INDIANS THROUGH THE MUSKOGEE, OKLAHOMA AREA OFFICE OF THE BUREAU OF INDIAN AFFAIRS

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