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Reasons American Indian Students Do Not Typically Choose Industrial Education as a Major at BYU

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REASONS AMERICAN INDIAN STUDENTS DO NOT TYPICALLY CHOOSE INDUSTRIAL EDUCATION AS A MAJOR AT BYU

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TABLE OF CONTENTS

Page

APPENDIXES

Page

LIST OF TABLES

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CHAPTER 1

Introduction

The first American Indians began to settle on the American continent some ten to twenty thousand years ago. Some studies show American Indians had hunted animals which existed or lived during the ice age, but have since become extinct (Stuart and Stuart, 1969). During the ice age and later, simple woodworking tools were made of stones and bones. Tools such as the stone drill, stone scrapers, stone knives, bone awl, sandstone sanders, and stone sharpening block were used during the ice age and later in history (Frison, 1974). Some of the technology these primitive people employed is much the same as that used by students in modern industrial education classes: the primary difference being the electricity and development of tools. An assumption is made that during these prehistoric times, fathers and others taught practical arts to upcoming generations so that these crafts and tool making could be preserved. Later in history, more advanced crafts and tools such as totem pole carving, mask carving, canoes, copper drills, and copper scrapers were introduced. Many of these crafts and tool making had religious significance and were influenced and often supervised by religious leaders or medicine men (The National Geographic Society, 1974).

Up to 1618 there are no written records found as to what type of education system was used to preserve practical arts. Efforts to start some form of practical arts education classes were started in 1619 in

Jamestown. Later the American Indian boarding school systems were started by the U.S. government. These classes had great emphasis on industrial education (Monroe, 1974). Later, many of these boarding schools closed down and the emphasis was more on local day schools.

During pre-Columbian times, Native Americans had a fairly well-developed form of practical arts such as wood carving, lapidary, and leather crafts (National Geographic Society, 1974). During the early colonial days and later, efforts at education had always emphasized manual trades such as carpentry, blacksmithing, and tin smithing. The interest in the introduced foreign forms of manual trades by early colonizers has not been well accepted by Native Americans (Deloria, 1974).

From kindergarten to college graduation, this writer has never met an American Indian planning to be an industrial education teacher, nor has he ever met an American Indian industrial education teacher. Also, this researcher spent two years as a missionary for The Church of Jesus Christ of Latter-day Saints (L.D.S.) where he worked with American Indian tribes. During these two years, he visited schools, parents' homes, taught seminary, and worked with American Indian youth groups. During those years, the author never met an American Indian industrial education teacher nor any student planning to major in industrial education, even though there were several Indian mission schools, Indian boarding schools, and public middle and high schools on or near the reservations.

After college graduation, the researcher spent five years as director of the Indian seminary in the Pacific Northwest. The writer

served as the Brigham Young University (BYU) admissions advisor for American Indian students for the Seattle North region. During these years, he taught high school seminary, recruited promising students for BYU, presented workshops at high schools, worked with high school Indian advisors, and put on BYU workshops at Indian youth conferences in Washington and British Columbia, Canada. Throughout these activities, the writer never met a student planning to major in industrial education.

BYU has had an interest in American Indian education which has its foundation in the Book of Mormon, Doctrine and Covenants, and teachings of the LDS prophets and the LDS apostles.

The Book of Mormon identifies the American Indian as a remnant of the house of Israel. It also identifies the "gentiles"--those people responsible for restoring to this remnant the knowledge of the truth and preparing them to be a useful, righteous branch of Israel and aid in the building of the New Jerusalem. This includes educating them in secular knowledge and vocational training, as well as gospel principles (Simmons and Maestas, 1978).

The early LDS leaders counseled Mormon pioneers to avoid taking something and giving nothing in return. Perhaps the LDS prophets and apostles thought that educating the Indians, sharing their harvest with them, sharing the gospel, and teaching Indians new methods of farming were fair exchange for taking and settling on Indian lands and territories.

> I tell you, if we send this people off from us and treat them with contempt we shall regret it, and mourn because of it. I am going to tell you what to do with these natives, you Bishops and

> Presidents of Provo and Springville, call out those teams which you have about you, all of them, and if these Indians want wood, haul it for them, for you have burned theirs, and they need a little wood as well as you. Let them have feed on the range for their horses, wood to burn, and then they will let you alone. You will eat their fish too, on which they depend for a living one part of the year, and every service berry that you can find in the mountains, and still you grumble to let them have a little with you. You don't want the crickets, and therefore they can have the whole of them, but you have secured the antelope and everything else that you could make any kind of use of. Before the whites came, there was plenty of fish and antelope, plenty of game of almost every description; but now the whites have killed off these things, and there is scarcely anything left for the poor natives to live upon (Simmons and Maestas, 1978, 108).

The fact remains that non-Indian LDS members remain on and continue to live on lands and territories that once belonged to the Indians. The LDS leaders encouraged members to continue to support the education of Indians and limit their economic, spiritual, and educational disadvantages by expanding their opportunities. For example, a recent LDS prophet said,

> Why do I return to a rehearsal of the indignities against the Indian? The answer is that we have a debt to pay. We are deeply indebted and we shall never have liquidated that debt until we shall have done all in our power to rebuild the Indian and give him back the opportunities that are possible for us to give him (Simmons and Maestas, 1978, 479).

Based on the teachings from the scriptures and the LDS prophets and apostles, the LDS Church has felt an obligation to provide economic, spiritual, and educational assistance to American Indians. The trustees of the LDS Church have placed upon the administrators and faculty of BYU the responsibility of providing some of the educational and spiritual assistance for American Indians and of assisting in the enlargement of opportunities for the American Indians of the United States.

However, with all this encouragement for education, examination of the records of the BYU Multicultural Education Department (American Indian Section) show that in one hundred and nine years of BYU history, no American Indian student is on record as having graduated from the Department of Industrial Education at BYU (see Appendix B on page 41). Although the record shows one Eskimo student graduating in Industrial Education, based on the information found in Peter Freuchen's Book of the Eskimos, the United States Department of the Interior, Bureau of Indian Affairs' pamphlet, "The American Indians' Answers to 101 Questions" (The Superintendent of Documents, 1974), and The Encyclopedia Americana (Monroe, 1912) as other texts, the Eskimo and Aleuts are a different racial group than American Indians.

Problem Statement

The lack of American Indian students in the BYU Industrial Education program presents a need for this study. This study is important because prospective American Indian students may be avoiding Industrial Education as a major due to problems within the department or some other unknown variables. In a meeting with the BYU Industrial Education Department, the problem of lack of American Indian students was brought to their attention.

The Department has interest in knowing why American Indian students do not typically choose Industrial Education as a major and extending opportunities afforded by industrial education. This paper will examine some of the reasons American Indian students do not typically choose Industrial Education as a major.

Statement of Purpose

The purpose of this study is to examine reasons why American Indian students do not typically choose Industrial Education as a major at BYU.

Specific Concerns Included In the Study

Are American Indian students at BYU influenced to not go into Industrial Education by role models, fear, religion, lack of opportunity, lack of information and lack of interest, or some other unknown variable?

Delimitations

This study was limited to:

1. A sample of ninety-two American Indian students who completed the questionnaire.
2. The American Indian tribes of the United States.
3. The American Indians who were full time students at BYU during the Winter semester 1985.
4. Information related to Industrial Education.

Limitations

The following limitations may have affected the results of this study:

1. It was not possible to identify every student of one quarter or more degree of American Indian blood at BYU.
2. It was not possible to obtain completed surveys from one hundred percent of the American Indian students enrolled

during Winter semester due to time and financial limitations.

3. It was not possible to force students to seriously consider the survey questions and answer them honestly.

Definitions of Terms

American Indian: An American individual who is one-fourth or more of Indian descent. For a more detailed discussion and definition published by the U.S. government, see Appendix A on page 39.

Eskimo and Aleut: The Indian migration to North America preceded the Eskimo and Aleut migration by many thousands of years. There are distinct cultural, linguistic, and genetic differences between American Indians on the one hand and Eskimos and Aleuts on the other, representing different waves of migration. While the Aleut and Eskimo languages are mutually unintelligible today, they are derived from a common stem (The Superintendent of Documents, 1974).

Organization of the Remainder of the Study

Chapter two reviews research, publications, and other literature related to this study. The topics are discussed under the following headings: (1) Practical Arts in American Indian Culture, (2) Introduction of Industrial Arts Related Classes Among American Indians, (3) Education Administrators' Positive Intentions for Indian Education, and (4) Literature That Shows a Negative Relationship.

Chapter three describes the methods and procedures that guided this study. This includes (1) description of the population, (2) development

of the questionnaire, (3) procedure for gathering data, and (4) method of interpretation.

Chapter four presents the findings from the survey. The related data from the questionnaire are combined for interpretation. Data is reported in percentages and summaries.

Chapter five describes (1) the summary of the study, (2) the conclusions drawn from the findings, and (3) recommendations and suggestions for further study.

CHAPTER 2

Review of Related Literature

Introduction

It was the purpose of this study to determine reasons American Indian students do not typically choose Industrial Education as a major at BYU. This review will be confined to literature that deals with these aspects of the study.

A search of the Brigham Young University library failed to reveal any study directly related to the topic presented in this paper. There was no evidence of "a descriptive analysis of reasons American Indian students do not typically choose Industrial Education as a major at BYU," nor a topic closely associated to that. This search for information included an ERIC (Educational Resources Information Center) search; Dissertations and Abstracts ONLINE; and RLIN computer searches using the following descriptors: American Indians, Industrial Education, Vocational Education, Major Career Choice and Reasons. The search also included a manual search of thesis and dissertations done at BYU; Educational Index; Social Science Index; Readers' Guide; and Technology Index and a card catalog search to examine information not in the BYU Library computer data base.

However, this research shows several previous studies which were somewhat related to this topic. The review of this literature is presented below under the following headings: (1) Practical Arts in American Indian Culture, (2) Introduction of Industrial Arts Related

Classes Among American Indians, (3) Education Administrators' Positive Intentions for Indian Education, and (4) Literature That Shows a Negative Relationship.

Practical Arts in American Indian Culture

Simple woodwork and working with tools date back to the time of the ice age. The process of cutting, shaping, and sanding wood with use of proper tools was important to the Paleo-Indians during the ice age. The Paleo-Indians worked with stone and bone as practical arts material. Most of these materials were turned into hunting instruments and cutting and digging tools (Frison, 1974). The Paleo-Indians hunted the Jefferson's wooly mammoth which is now extinct. There are a number of Paleo-Indian campsites and kill sites in Dent, Colorado; Union Pacific, Wyoming; Miami, Texas; Amebo, Oklahoma; Blackwater Draw, New Mexico; Naco, Leikem, and Escupuia, Arizona; which have been discovered. The radio carbon dates from these camp and kill sites range from 11,310 ± 240 years (Clovis) to 11,160 ± 500 years BP (Domebo). (Kurten and Anderson, 1980).

Later in history the American Indian tribes in the Eastern Woodland, Pacific Northwest, and Southwest tribes improved on the process of cutting, shaping, and sanding with tools. Improvements in woodworking included advanced woodwork such as totem pole carving, religious wooden mask carving, boat carving, application of paint on wood and burn out wooden canoe (The National Geographic Society, 1974). Improvement in tools and new tools such as stone drills, copper awls,

copper axe, sanding blocks, and sanding stone helped improve woodworking (Ritzenthaler, 1967).

Navajo Indians used finishing agents such as animal fat to polish and preserve the wood. Navajos also used hard pine gum as glue and horns of bighorn sheep and mountain goat with drilled holes to achieve smooth, shiny finishes on wooden dowels. Navajos had some knowledge of basic woodworking such as wood identification, location, steaming, bending (re-curves), carving, cutting, drying (roasting), sanding, polishing, application of adhesive, and applying paint to the finished project. Navajo religious teachers played an important role in wood identification, selection, and reinforcing restriction on the type of wood to be used. For example, Navajos in home building did not use wood which had been struck by lightning and wood from burial homes. In some cases a prayer was offered before the wood was cut. Wood material selection in some cases required the help and advice of a knowledgeable medicine man. The medicine men and women reinforced their teachings by attaching physical ailments, sickness, and misfortunes to breaking taboos. But at the same time, they claimed to have cures for causes of sickness. It is assumed that the religious teachers and practitioners played an important role in preserving knowledge and practice of practical arts. But at the same time, they stood in the way of greater advances in practical arts among the Navajos. This may likewise be true among other Indian tribes. Through a tape recorded interview with a person who has knowledge of Navajo traditional practical arts, it was learned that information about practical arts and how it was preserved through time among the Navajos was passed from father to son, and during

preparation for everyday survival needs, ceremonials, hunting, and war activities (Canyon, 1983).

There was no written record among the Navajos of how practical arts were taught before contact with old world cultures. The same is true with other American Indian tribes in the United States.

Introduction of Industrial Arts Related Classes Among American Indians

As early as 1619, records indicate some form of organized industrial education being introduced to the early natives of the east coast of America. In 1619, the council of Jamestown voted to educate Indian children in "religion, a civil course of life, and in some useful trade." In Massachusetts, during colonial times, John Eliot taught secular subjects and religion to the natives. He supervised the building of an Indian town of Natick. The town was laid out, built, and planted by Indian labor. At about the middle of the eighteenth century, an industrial boarding school was founded at Stockbridge, Massachusetts. Several students who attended Stockbridge Industrial Boarding School later continued and completed their studies at Dartmouth College, which was founded in 1755 as "Moor's Indian Charity School." In 1873, reservation boarding and day schools were first established by the government. Among the courses in elementary grades and in all of the boarding schools, the industrial feature has been prominent, but has only gradually been introduced into the day schools (Monroe, 1912). By 1912, Carlisle Indian Industrial Boarding School had an enrollment of about one thousand students and Hampton Institute had about one hundred American Indian students. They were given a grammar school education,

with one-half of their time being devoted to agriculture, domestic work, or one of the mechanical trades, taught both for its educational and practical value (Pratt, 1964). Many industrial boarding schools such as Phoenix Indian, Intermountain Indian, Riverside Indian, Albuquerque Indian, and Carlisle Indian schools were built near large cities and most students had to be transported hundreds of miles to attend these schools. Some of the boarding schools were closed due to the recommendation of the Commissioner of Indian Affairs so more of the American Indian students could attend improved reservation day schools.

Education Administrators' Positive Intentions for Indian Education

The intentions of the early colonial settlers was to Christianize the American Indians. Their records seem to indicate that their intents were good but the natives could not be Christianized because they had no knowledge of reading and therefore could not read the Bible. The natives couldn't read, write, or speak the same language; therefore, the early settlers introduced formal classes to educate Indian children. The movement went from Christianizing to civilizing the natives. Civilizing the natives meant Christianizing, teaching them to read and write, but another new addition which seemed to be a necessary ingredient to becoming civilized was to learn a useful, manual trade. (Monroe, 1912, 418).

In 1621, the colonists had alloted one thousand acres of land and received subscriptions to endow an Indian school, where the most qualified students may attend and prepare for college. A few of the American Indian children were taken to England to be educated, but

courses they studied are unknown. About 1663, King James issued a letter authorizing collections to be taken in the cathedrals for "the education of the children of these Barbarians." In 1693, William and Mary College was founded. Their charter declares that one of the main objectives was "the propagation of the Christian faith amongst Western Indians." Other schools such as Harvard College, Dartmouth College, Moravian, and Quaker mission schools included in their charter provisions for Indian education. In the latter part of the eighteenth century, there were Russian and English schools established for the natives in Alaska (Monroe, 1912, 418). All these schools mentioned were involved in civilizing natives, and records seem to indicate that their intentions were positive. In 1830, the Church of Jesus Christ of Latter-day Saints began its attempts to Christianize the Indians. On April 6, 1845, the Proclamation of the Twelve Apostles of The Church of Jesus Christ of Latter-day Saints was given. Part of this proclamation as it relates to the Indians reads:

> For they must be educated, and instructed in all the arts of civil life, as well as in the gospel. They must be clothed, fed, and instructed in the principles and practice of virtue, modesty, temperance, cleanliness, industry, mechanical arts, manners, customs, dress, music, and all other things which are calculated in their nature to refine, purify, exalt and glorify them, as the sons and daughters of the royal house of Israel, and of Joseph; who are making ready for the coming of the bridegroom . . . (Simmons and Maestas, 1978, 24).

In 1855, Wilford Woodruff encouraged early settlers of Provo, Palmyra, Springville, and Payson, Utah, to carry out this proclamation among the Indians who resided near Payson and Springville. In 1950, George Albert Smith admonished the saints who lived in Brigham City to carry out the content of the proclamation among the students of the

Intermountain Indian School, Brigham City, Utah (Simmons and Maestas, 1967, 102-113).

The concept of blending religion and manual arts education as introduced by early Christians has been part of American history. This concept was also practiced by the early Christian monks, the Benedictines, monastic schools, and the Father of Industrial Education, Pestalozzi. The importance of religious and manual arts was a very important part of Jewish education. Since Christianity has its roots in Judaism, their approach to education seems to be similar. The main emphasis of Jewish education was religion; it was to make every child a firm believer in Jehovah. Besides instruction in the law, there was also instruction in some trade or other vocation. The Talmud says, "As it is your duty to teach your son the law, teach him a trade" (Bennett, 1926).

The early colonists' guiding philosophy may have been similar to that of the Jews: "As it is your duty to teach the Indian the law, teach him a trade." But on the other hand, some educators' guiding philosophy was that "Indians are good with their hands." So curriculum was aimed primarily at training in skills, with boys learning trades such as carpentry and the girls learning a version of home economics (Deloria, 1974, 80).

Literature That Shows a Negative Relationship

When foreign manual arts were introduced to the natives, records seem to indicate that manual arts was never taught by itself, but was always taught along with religion, reading, and writing. The early

colonists were not satisfied with an educated native who only knew how to read and write and had a useful trade. But, the process of civilizing natives was constantly being interrupted by many problems such as racial prejudice, disease, lack of funds, lack of teachers, lack of students, colonists' hunger for more land, wine, wars, gold, and those colonists who lacked the firm conviction to spread their faith. Because of those who lacked the conviction to spread Christianity, the chances of natives becoming Christianized and civilized were delayed. The chances of American Indians learning manual arts were all dependent on how fast Christianity spread. Therefore, in colonial times, without Christianity, there were no formal manual arts classes taught. Later, in 1873, the government took over education of Indian students but still the students were required to attend a weekday religion class and attend church on Sunday.

As America became more advanced, powerful, wealthy, and civilized, the educated public tended to show lack of respect for those who pursued manual arts. The importance of religion and learning a trade tended to take a back seat to pure education. Those Indians who were enrolled in the industrial boarding schools were targets of the educated public. In 1913, Albert H. Leake, in his book Industrial Education: Its Problem, Methods, and Dangers states the term "industrial," as used until very recently, shows the popular conception. It was, and in some cases still is, applied in a narrow, limited, and degraded sense to schools for moral delinquents, as though industrial pursuits were to be engaged in only by those who had broken the laws of the country. Indeed, some American critics have said that if a boy wishes to secure education for

industry, he must be either a negro, an Indian, or a criminal (Leake, 1913).

This lack of respect for students in pursuit of manual arts, by some of the educated public, is similar to the attitude of the early educated Greeks and Romans. The manual arts had a place of respect during the Homeric age. But in later times, it was referred to as merely mechanical. The upper class Greeks looked down upon the banausic arts. During this time, the banausic arts were performed by the slaves who did all the repetitive work, while the supervision was assigned to the Greek overseers. When the Romans conquered Greece, they integrated much of Greek thought, architecture, arts, etc. The Romans had similar manual arts training where slaves did much of the mechanical work (Bennett, 1926).

Many of the problems of American Indian students were experienced by other disadvantaged groups such as Blacks, Orientals, and Mexican Americans. In recent years American Indians, Blacks, Orientals, and Mexican Americans have been classified as minorities. Earlier studies have dealt with American Indians; more recent research deals with the broader grouping of minorities in general rather than American Indians specifically. A 1977 study done by Kent A. Goto deals with problems of recruiting minority people into industrial arts for the western states of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. The study identified minority industrial education teachers in Region VIII (western states). Some minority teachers listed racial prejudice, lack of recruitment, lack of information, attitude of parents and peers, and role models as sources of problems for the minority teachers and

students going into industrial education. The respondents only identified themselves as a minority, not as belonging to a particular racial group, so the number of American Indians, if any, is unknown (Goto, 1978).

CHAPTER 3

Methods and Procedures

The purpose of this study was to determine why American Indians do not typically choose Industrial Education as a major at BYU. During the literature search, the researcher failed to find literature directly related to this topic. A questionnaire was developed to obtain data about the topic and was administered to an identified American Indian student population on and off BYU campus.

Description of Population

The researcher made an attempt to reach the potential population of the full-time American Indian students attending BYU during winter semester of 1985. But the researcher could not obtain names of American Indian students because of the confidential nature of records. Therefore, he administered the questionnaires to identified American Indian students on and off campus to reach as many as possible. One hundred and twenty-two American Indian students were identified and ninety-two students completed the questionnaire, which is 75 percent of the total identified population.

Description of the Instrument

After identifying the population, a questionnaire was developed after failing to find a standardized instrument which specifically deals with reasons American Indians do not typically choose Industrial Education as a major at BYU. The questionnaire was designed and pilot-

tested to gather data relevant to the research questions. The reasons included in the questionnaire were determined partly due to input received from the pilot test of randomly selected American Indian students. Other reasons were selected from a search of related literature and other questions were added due to department interest. The questionnaire was reviewed by carefully selected faculty with former experience in Indian education at BYU, by a thesis committee, by assigned statistic department representatives, by the thesis writing advisor, and the BYU English writing lab. All contributed in different ways to insure proper grammar, correct spelling, content, validity, clarity of reasons, and to insure ease of self administration.

The questionnaire requested information relating to (1) current class status; (2) sex; (3) major; (4) tribe; (5) home state; (6) town or city; (7) full-time; (8) religion: LDS or non-LDS; (9) degree of American Indian blood: more than a quarter or less than a quarter; (10) reasons and other influential factors for not choosing Industrial Education as a major; (11) open-ended responses; (12) information about industrial arts classes taken in high school, if the teacher was an American Indian and where he or she got his or her degree; (13) attended high school on or near reservation and number of years at that reservation school; (14) if BYU and high school counselor suggested industrial education as an option; (15) if students attended LDS placement program; (16) how many years on LDS placement; and (17) if students graduated when on LDS placement program.

The questionnaire was self administered by students circling appropriate responses or in some cases the subjects had to write in their responses.

Procedure for Gathering Data

As mentioned previously, the questionnaire was developed by a pilot study, preliminary interviews with randomly selected Indian students, preliminary survey, and reviews by selected faculty at BYU. After approval from the thesis committee, the questionnaire was ready to be administered to the identified population. An attempt was made to reach the potential BYU American Indian students, but because of the confidential nature of records, names of specific individuals who declared themselves American Indian could not be obtained. Therefore, with approval from the multiculture education department, professors with high enrollment of American Indian students were contacted, students picking up scholarship money from the multiculture financial aid office were asked to fill out the questionnaire, and other students were identified on campus and off campus in an attempt to reach as many as possible. A list of names of students who completed the questionnaire and a number on the survey which identified the student was used "so a student would not be surveyed twice." However, some students' names were not obtained due to late returns, students failed to record names, and a breakdown in organization in administering the questionnaire to a large class. Those students who completed the survey and then were contacted the second time were very courteous to remind the surveyor that they had already responded to the survey. After

winter semester the name list was destroyed to insure the confidentiality of the survey.

Interpretation of Data

For ease of tabulation and analysis, a numbering system which was acceptable for the BYU VAX-8600 computer was set up for the questionnaire. After winter semester 1985 the data were entered into the computer. Some of the data from the questionnaire were tabulated and analyzed by portable statistical calculator. The questionnaire was divided into four areas: personal information, reasons for not choosing Industrial Education as a major, other reasons not listed in the questionnaire, and general information. Data from personal information included summations and percentage categories for each question. The same calculations were performed on data from reasons for not choosing Industrial Education as a major, other reasons not listed in the questionnaire, and general information. The data were tabulated for interpretating and drawing conclusions from observed data.

Summary

Chapter three described the methods and procedures used in this study. The study identified and described the population selected, the development of the instrument, the procedure used to collect data, and the way the data were interpretated.

CHAPTER 4

Presentation of Findings

The purpose of this study was to examine reasons why American Indian students do not typically choose Industrial Education as a major at BYU. This study further examined other related information such as religion, number of LDS placement students, American Indian industrial arts teacher, tribe, shop class(es), attendance at reservation and near reservation high school, high school counselors, and counselors at BYU.

The data were obtained by development of a questionnaire to survey 122 identified full-time American Indian students. The data obtained and reported shows that ninety-two students completed and returned questionnaires, which is 75 percent of the population.

The results of the questionnaires are presented in the following five sections: 1) personal information, 2) related information, 3) reasons not included in the survey, 4) industrial education background, and 5) other general information.

Personal Information

This part of the questionnaire was developed to obtain personal information about each subject. All of the subjects were asked the following: their current class status, sex, major, tribe, home state, town or city, full-time student (part-time students do not apply), LDS or non-LDS, and their degree of Indian descent.

Current Class Status and Sex

This part of the questionnaire obtained data on the current class standing and sex of each subject surveyed. The findings were as follows: 35 percent were freshmen, 13 percent were sophomores, 15 percent were juniors, 23 percent were seniors, 4.4 percent were masters, and two students failed to fill in the blank. Findings on sex were as follows: 44.6 percent were male and 55.4 percent were female. For further information see data presented in Tables 1 and 2 on page 50 located in Appendix D.

Major, Tribe, Town, and Home State

The data obtained about major, tribe, town, and home state was as follows: There were 40 different majors and 17 undeclared majors; 19 different tribes, 9 mixed tribes; 61 towns, and 18 states. For more detailed information, see Tables 3, 4, 5, and 6 on pages 51-56 in Appendix D.

Full-time Student Status, Religion, and Degree of American Indian Descent

The results about full-time student status, religion, and degree of American Indian descent were as follows: 100 percent were full-time students, 91.3 percent were LDS, 8.7 percent were non-LDS, and 100 percent were one-quarter or more American Indian. For more detailed information, see Tables 7, 8, and 9 on pages 57-58 in Appendix D.

Related Information

For purpose of clarity, some related questions and statements from the questionnaire were combined to better examine and to interpret the data obtained. Furthermore, questions 1 through 24 dealt with reasons for not choosing Industrial Education as a major. Every student read the statement and rated each statement as a major reason, an important reason, somewhat important reason, and not important reason for not choosing Industrial Education as a major by circling the corresponding number. (For more detailed information, see sample of questionnaire on page 45 in Appendix C.) For purpose of interpretation, responses rated as major reason and important reason were considered significant by the researcher and somewhat important reason and not important reason insignificant. For this reason the percentages from the major and important reason columns were combined and percentages from the somewhat important and not important reason columns were combined separately. The statements rated as major or important reason were considered significant because the purpose of this study is to examine reasons why American Indian students do not typically choose Industrial Education as a major. In addition, the "somewhat important" and "not important" responses were considered significant in that they reflected student opinion and presented other insight into reasons not important to them. Responses to other questions in this chapter requested a yes or no answer and others were open-ended questions. A student who responded to a statement was recorded as a valid case and recorded in the valid percent column. A student who did not respond was reported as a missing case and not included in the valid percent column. Therefore, the

percentages for each statement given in chapter four and five reflect the valid cases or valid responses.

Lack of Information

Questions 2, 5, 33, and 34 relating to lack of information were combined to examine if lack of information was a significant reason for students to not choose Industrial Education as a major. The findings were as follows: 38 percent of total valid respondents did not know there was a major in Industrial Education, 21.3 percent of the total valid respondents were advised by counselors about Industrial Education as a major while in high school, and only 2.2 percent of the total valid responses were advised by counselors about Industrial Education as a major while attending BYU. Of the total valid respondents, 21.8 percent indicated that high school industrial arts classes were not considered college preparation classes, and the respondents rated that as a major or an important reason. For more detailed information, see Tables 10b, 10e, 19, and 20 on pages 59-60, 76-77 in Appendix D.

Lack of Interest

Data about the BYU American Indian students' interest in teaching industrial education and general interest in industrial education as a class was examined, and question numbers 3 and 4 were combined to examine related topics. Of the total valid respondents, 58.7 percent were not interested in teaching Industrial Education, and 49.5 percent of total valid respondents lacked interest in the subject. For more detailed information, see Tables 10c and 10d on pages 59-60 in Appendix D.

Image and Role Identification

Questions concerning image and role identification were combined to examine the related data. Questions 7, 13, 15, 20, and 21 were combined for this purpose. The findings were as follows: 6.7 percent of the total valid responders felt Industrial Education classes are for low-achieving students only. Of the total valid respondents, 16.5 percent indicated that their parents encouraged them to study in a different field, and 25.3 percent of valid respondents did not choose Industrial Education as a major because their role model was in a different field. Of the women who responded to question 20, 13.2 percent of the total valid responders indicated that Industrial Education classes were for men. Of the total valid responses by women only, 6.3 percent felt girls were not allowed to take high school shop classes in high school. For more detailed information, see Tables 10g, 10m, 10o, 10t, and 10u on pages 61, 64-65, and 68 in Appendix D.

Lack of Job Opportunities and Higher Salaries in a Different Field

Question numbers 6 and 14 examined if lack of job opportunities in industrial education and if higher salaries in a different field influenced American Indians to choose other majors. Of the total valid respondents, 25.3 percent felt there are limited job opportunities in industrial education, and 38.5 percent of total valid respondents rated higher salaries in a different field as major and important reasons for not choosing Industrial Education as a major. For more detailed information, see Tables 10f and 10n on pages 61 and 63 in Appendix D.

Fear

Questions related to fear were combined for the purpose of examining reasons students do not typically choose Industrial Education as a major. Some students may be afraid to take majors like Industrial Education that have math requirements, difficult graduation requirements, majors with technical subjects, and some students may avoid majors because of their lack of talent in that field. Some American Indian women may avoid a major such as Industrial Education because they could eventually teach predominately male classes. Traditionally, industrial arts graduates, teachers, and students have been male dominated.

Questions 1, 9, 10, 16, and 22 were combined to examine related data. Only 4.4 percent of the total valid responders indicated Industrial Education graduation requirements are too difficult. Of the total valid respondents, 9.7 percent avoided a major because of its math requirements, and 11 percent of total responders indicated Industrial Education classes are too technical. Due to lack of talent in Industrial Education, 20.9 percent of the respondents did not consider Industrial Education as a major. Of the total valid women respondents, 12.7 percent felt they did not want to teach boys. For more detailed information, see Tables 10a, 10i, 10j, 10p, and 10v on pages 58, 62, 63, 66, and 69 in Appendix D.

Religious Influence

Questions 12 and 24 were combined to examine if prayer and patriarchal blessings influenced students' decisions to choose other

majors besides Industrial Education. Of the total valid respondents, 9.9 percent chose another major because of an answer to prayer. Of the total number of LDS students who responded to question 24, 5 percent felt their patriarchal blessing encouraged study in a different field. For more detailed information, see Tables 101 and 10x on pages 64 and 70 in Appendix D.

Background Information on American Indian Students Who Have Had Industrial Education or Industrial Arts Class(es)

Questions 18, 19, 26, 27, 28, and 29 from the survey are combined to gather the following data: if students did not like their shop teacher, if Industrial Education or Industrial Arts classes were taken as hobby or fun classes, if high school shop class(es) were taken, if the teacher was an American Indian, and if so, where the teacher obtained his or her degree. The findings were as follows: Of the total valid responses by students who had shop class(es), only one student (2 percent) did not like his shop teacher. Thirty-seven percent of the total valid responders took Industrial Education classes only as hobby or fun classes. Of the respondents who had Industrial Arts classes in high school, 78 percent were men and 22 percent were women. Four students (ten percent) had an American Indian industrial arts teacher. Only one student (3 percent) identified where his teacher received his or her degree (Phoenix Institute of Technology).

Data on the type of shop classes taken by 40 students who responded to question 27 were as follows: 31 students (77.5 percent) had taken a course in wood work, 12 students (30 percent) in drafting, 10 students

(25 percent) in auto shop, 7 students (17.5 percent) in welding, 5 students (12.5 percent) in metal work, 5 students (12.5 percent) in machine shop, 3 students (7.5 percent) in electronics, 1 student (2.5 percent) in plastics, and 1 student (2.5 percent) in tool and equipment. For more detailed information, see Tables 10r, 10s, 12, 13, 14, and 15 on pages 67, 73-74 in Appendix D.

Open-ended Responses

This section of the questionnaire asked American Indian students to list their reasons, if their reason(s) for not choosing Industrial Education as a major were not included in the questionnaire.

The findings were organized into related reasons such as lack of interest, lack of information, higher salary, fun classes, undeclared majors, and mind made up earlier or decided major earlier in life. Most of these responses were discussed under related information. However, they were grouped into categories as follows: 15 were in the lack of interest, 13 were in the lack of information, 4 were in higher salaries elsewhere, 4 were in shop as a "fun" class or because it was related to hobby, 1 was undecided about his major, and 6 were in the "mind made up earlier in life" about a major. The responses in the mind made up earlier in life and declared major previously category was the only new reason not included in the questionnaire. For more detailed information, see Table 11 on page 71 in Appendix D.

Other General Information

Questions not related (8, 11, 17, 23, 30, 31, 32, 35. 36, and 37) were combined into other general information category. These questions

obtained data about the tribes' funding majors beneficial to the tribe, the number of students still undecided about a major, whether lack of experience in the field of Industrial Education influenced students not to choose Industrial Education as a major, and whether lack of girls in Industrial Education classes influenced some male students not to consider Industrial Education as a major. Other questions obtained data about whether any student attended high school on a reservation or near a reservation, number of years attended on a reservation high school, and whether any student lived on a reservation but attended school away from home and lived with LDS foster parents during the school year. Data also included students attending school and living permanently off reservation communities in the United States. Some questions (30, 32) were added to explore job possibilities at high schools on and near reservations. Other questions were added for department interest, and for data on general information related to Industrial Education.

Of the total valid responses, 18.6 percent of their tribe's higher education departments did not have Industrial Education on their priority list. Of the valid responses, 17.6 percent rated undecided about a major as major or important factor. Of the total valid responses, 32.7 percent rated lack of experience as a significant factor. Of the male students who responded to this question, 4.7 percent felt that lack of girls in Industrial Education classes influenced them to consider other majors. Data on high school attended and LDS placement program background are in the Appendix to be used for further study and for department use. For more detailed information,

see Tables 10h, 10k, 10q, 10w, 16, 17, 18, 21, and 22 on pages 62, 63, 66, 69, 75, 76, 77, and 78 in Appendix D.

Summary

Chapter four describes the presentation of findings obtained from the data about personal information, related information, open-ended responses, and other general information. Findings are presented in percentages and summations. The findings of this study are as follows:

1. The tribe most represented at BYU is the Navajo tribe; other tribes are represented by an average of one (1.3 percent) student per tribe.

2. Most of the students in the survey were members of The Church of Jesus Christ of Latter-day Saints. Fifty percent of these LDS students had been on the LDS placement program.

3. A significant number of students chose lack of information as a reason for not choosing Industrial Education as a major.

4. A significant number of students chose lack of interest in teaching industrial education as a profession and lack of interest in it as a subject.

5. A significant number of students felt the influence of role models was important in choosing other majors besides Industrial Education.

6. A significant number of students chose limited job opportunities and higher salaries in other majors as reasons for not choosing Industrial Education as a major.

7. A majority of the male students surveyed had a course(s) in industrial arts.

8. Other reason(s) not included in the questionnaire were that some students decided their major at a young age.

9. Due to lack of talent and experience in Industrial Education, some American Indian students chose other majors.

CHAPTER 5

Findings, Conclusions, and Recommendations

The purpose of this study was to examine reasons why American Indian students do not typically choose Industrial Education as a major at BYU. This study also examined other information such as personal information, reasons not included in the questionnaire, and other general information related to the study. An attempt was made to answer the following question: Are American Indian students at BYU influenced not to go into Industrial Education by lack of interest, lack of information, lack of job opportunities, by religion, by fear, by role models, by counseling, or some other unknown variable?

Review of related literature showed that there was no literature directly related to reasons American Indian students do not typically choose Industrial Education as a major at BYU. However, other information related to this topic was presented under the following headings: 1) Practical Arts in American Indian Culture, 2) Introduction of Industrial Arts Related Classes Among American Indians, 3) Education Administrators' Positive Intentions for Indian Education, and 4) Literature That Shows a Negative Relationship (concerning a lack of respect for those who pursue an education in manual arts). Using a questionnaire survey, this study examined the reasons why American Indian students do not typically choose Industrial Education as a major at BYU.

Due to the confidential nature of records, names of American Indian students enrolled in winter semester of 1985 could not be obtained. Therefore, the questionnaire was administered on and off BYU campus to American Indian students. One hundred and twenty-two students who voluntarily identified themselves as American Indians and who were more than a quarter American Indian blood were identified as the population. Of these, ninety-two students responded to the survey, which is 75 percent of the total survey population.

After the 1985 winter semester, the completed questionnaires were entered into the computer for tabulation into percentages and summations. Other data in the questionnaire could only be tabulated into percentages by portable calculator.

Findings

An outline of the significant findings of this study is as follows:

1. A significant number (65.9 percent valid respondents) of the American Indian students were from the Navajo tribe and 5.4 percent who were part Navaho.

2. Of the students surveyed, 91 percent of the students were members of The Church of Jesus Christ of Latter-day Saints. Of the LDS students, 50 percent had been on the LDS church's placement program.

3. A significant amount of responses were related to lack of information. The results are as follows: 38 percent of the total valid respondents did not know there is a major in Industrial Education. Of the total valid respondents, 78.7 percent were not informed by high school counselors about a major in Industrial Education, while only 21.3

percent of total respondents were informed. Of the total valid respondents, 97.8 percent were never informed by BYU counselors about a major in Industrial Education.

4. A high percentage of responses were related to lack of interest. Of the total valid respondents, 58.7 percent were not interested in teaching Industrial education, and 49.5 percent of the total valid cases lacked interest in the subject.

5. A smaller proportion of responses were related to image and role identification. Of the total valid respondents, 16.5 percent indicated that their parents encouraged them to study in a different field. Of the total valid respondents, 25.3 percent did not choose Industrial Education as a major because their role model was in a different field.

6. Of the total valid respondents, 25.3 percent felt there are limited job opportunities in Industrial Education, and 38.5 percent of the total valid respondents rated higher salaries in a different field as major and important reasons for not choosing Industrial Education as a major.

7. Thirty-seven percent of the total valid respondents took Industrial Education classes only as hobby or fun classes. Of the respondents, 78 percent were men and 22 percent were women. Of the total number of men in the survey, 75.6 percent of the men had taken a course(s) in industrial arts. Of the 40 students who had industrial arts courses, 31 students (77.5 percent) had a course in wood work.

8. Findings regarding reasons not included in the survey were as follows: Only one reason, mind made up earlier in life and decided

major at a young age, was not included in the survey. Other responses were related to other topics already discussed.

9. Of the total valid respondents, 32.7 percent rated lack of experience as a significant factor.

Conclusion

Based upon the findings of this study, it was concluded that there are multiple reasons why American Indians do not typically choose Industrial Education as a major at BYU. However, lack of interest and lack of information are most representative of students' responses to the questionnaire.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are suggested for action and for further research.

Recommendations for Increasing Enrollment

As results of the researcher's survey, it was recommended that:

1. Information on the BYU Industrial Education program be supplied to BYU counselors and to American Indian students in the Multicultural Education department.

2. Names and addresses of high schools on and near reservations be obtained to inform the schools about BYU's Industrial Education program.

Recommendations for Further Research

A study on the present status of Industrial Arts programs at high schools located on highly populated American Indian reservations in Arizona and New Mexico should be conducted because, based on the results of this study, a majority of the students are from Arizona and New Mexico.

APPENDIX A

Definition of American Indian

Definition of American Indian

There is no general legislative or judicial definition of "an Indian" that can be used to identify a person as an Indian. A person identified in the United States Census as an Indian generally declares himself to be one. The concept of race as used by the Bureau of the Census does not denote any scientific definition of biological stock, but rather an indication of what race a person identifies with. For persons of mixed parentage who are in doubt as to their classification, the race of the person's father is used.

To be designated as an Indian eligible for basic Bureau of Indian Affairs Services, an individual must live on or near a reservation or on or near trust or restricted land under the jurisdiction of the Bureau, be a member of a tribe, band, or group of Indians recognized by the Federal Government, and for some purposes, be of one-fourth or more Indian descent. By legislative and administrative action, the Aleuts and Eskimos of Alaska are eligible for programs of the Bureau of Indian Affairs (The Superintendent of Records, 1974).

APPENDIX B

Multicultural Education Statistics on American Indian College Graduates at BYU

1875 - 1984

MAJOR	BACHELORS	MASTERS
Agriculture Economics	4	
Agronomy	1	
Animal Science	6	
Anthropology	3	
Archeology	2	
Art	12	
Botany	1	
Building Construction	4	
Business	3	
Business Education	5	1
Business Finance	1	
Business Fundamentals	2	
Business Management	15	
CDFR	17	
Chemistry	2	
Civil Engineering	2	
Communications	10	
Communicative Disorders	2	1
Community Education	2	
Clothing and Textiles	1	
Education	27	2
Education Administration	1	4
Education Specialist	1	
Educational Psychology	2	1
Electrical Engineer	2	
Electronics Technology	1	
Elementary Education	63	2
Engineering		1
Economics	1	
English	5	
Environmental Health	1	
Family Economics	1	
Family Studies	7	
Forensics	1	
Genealogy	1	
Guidance Counseling	1	4
Health Education		1
Health Science	9	
History	12	
History of Religion		1
Home Economics Education	11	1

MAJOR	BACHELORS	MASTERS
Indian Education	1	
Industrial Education	1	
Instructional Media		1
Journalism	1	
Juris Law Degree	2	1
Juris Doctor Degree	2	
Justice Administration	3	
Law Enforcement	2	
Library Science		1
Linguistics	1	
Manufacturing Technology		1
Math	2	
Microbiology	3	
Music Theory	2	
Municipal Recreation Administration		1
Non Degree Graduate	1	
Nursing	AA 1 7	
Nutrition	1	
Organizational Behavior		1
Outdoor Recreation	2	1
Physical Education	8	
Physical Science	1	
Political Science	8	
Pre Dental	1	
Pre Law	3	
Pre Med	3	
Psychology	7	
Public Administration	1	5
Public Relations	2	
Range Science	2	
Recreation Education	4	1
Retail Marketing	1	
Secondary Education	3	
Sociology	27	
Social Work	48	1
Spanish	7	
Speech Education	3	

MAJOR	BACHELORS	MASTERS
Teacher Education	5	
Theatre & Cinematic Arts	2	
University Studies	23	
Youth Leadership	6	
Zoology	6	

APPENDIX C

Sample Questionnaire

Current Class Status

Ph.D.___ Masters___ Senior___ Junior___ Sophomore___ Freshman___ Sex Male___ Female___

Major_____ Tribe _____ Home State _____

Town or City _____ Full-time Student ____ Religion: LDS ____ Non LDS ____

Degree of American Indian Blood: More than 1/4 _____ Less than 1/4 _____

SURVEY

MY REASONS FOR NOT CHOOSING INDUSTRIAL EDUCATION AS A MAJOR

Please read each statement and rate with respect to its importance in your decision NOT to choose Industrial Education as a major by circling the appropriate number.

	Major Reason	Important Reason	Somewhat Important Reason	Not Important Reason
I did not choose Industrial Education as a major because:				
1. The Industrial Education graduation requirements are too hard.	4	3	2	1
2. I did not know there was a major in Industrial Education.	4	3	2	1
3. I have no interest in Industrial Education.	4	3	2	1
4. I have no interest in teaching Industrial Education.	4	3	2	1
5. High school Industrial Education classes are not considered college preparation classes.	4	3	2	1
6. There are very limited job opportunities in Industrial Education.	4	3	2	1
7. Industrial Education classes are for low achieving students.	4	3	2	1
8. Industrial Education is not on the list of priorities for my tribe's higher education department.	4	3	2	1
9. The math requirements for Industrial Education are too difficult.	4	3	2	1

10. Industrial Education classes are too technical.	4	3	2	1
11. I am still undecided about a major.	4	3	2	1
12. An answer to prayer has directed me toward a different major.	4	3	2	1
13. My parents encouraged me to study in a different field.	4	3	2	1
14. There are higher salaries in a different field.	4	3	2	1
15. I knew someone I respected very much (a role model) that was in a different field.	4	3	2	1
16. I have no talent in Industrial Education.	4	3	2	1
17. I have had no experience in Industrial Education.	4	3	2	1

For students who have had an Industrial Arts or Industrial Education class or classes at high school or college level.

Please respond to these statements:

18. I did not like my high school shop teacher.	4	3	2	1
19. I took Industrial Education class(es) only as fun class(es).	4	3	2	1

Women. Please respond to these statements:

20. Industrial Education classes are for men.	4	3	2	1
21. Girls were not allowed to take high school shop classes in my high school.	4	3	2	1
22. I do not want to teach boys.	4	3	2	1

Men. Please respond to this statement:

23. There are very few girls in Industrial Education.	4	3	2	1

Members of the Church of Jesus Christ of Latter-day Saints please respond to this statement:

24. My patriarchal blessing mentioned a different major. 4 3 2 1

25. If your reasons for not choosing Industrial Education are not included in this survey, please list your reasons.

1. _____

2. _____

3. _____

26. I had a class in Industrial Arts (shop class) in high school. Yes ___ No ___

27. If yes, indicate type of Ind. Arts or shop class which you had: _____

_____

28. Have you ever had an Industrial Education teacher who was an American Indian?

Yes _____ No _____

29. If so, where did he/she receive their degree? _____

30. Did you attend a high school located on the reservation? Yes _____ No _____

31. If yes, how many years? _____

32. Did you attend a high school located <u>near</u> the reservation (about 30 miles)?

Yes _____ No _____

33. Did counselors in high school suggest Industrial Education as an option?

Yes _____ No _____

34. Have counselors at BYU ever suggested Industrial Education as an option?

Yes _____ No _____

35. Were you on the placement program? Yes ___ No ___

36. If yes, how many years? _____

37. If yes, were you in the placement program when you graduated from high school?

Yes _____ No _____

APPENDIX D

Detailed Information on Results of the Questionnaire

Table 1

Class Status

Value Label	Frequency	Valid Percent
Freshman	35	38.9
Sophomore	13	14.4
Junior	15	16.7
Senior	23	25.6
Masters	4	4.4
*	2	Missing
Total	92	100.0

Valid Cases 90 Missing Cases 2

* = No response or missing

Table 2

Sex

Value Label	Frequency	Valid Percent
Male	41	44.6
Female	51	55.4
Total	92	100.0

Valid Cases 92 Missing Cases 0

Table 3

Major

Major	Frequency	Valid Percent
Accounting	1	1.1
Agronomy	1	1.1
Animal Science	2	2.2
Business Management	5	5.4
Child Development	1	1.1
Civil Engineering	3	3.3
Communications	3	3.3
Community Health	1	1.1
Computer Graphics	1	1.1
Computer Science	3	3.3
Design Technology	4	4.3
Educational Psychology	3	3.3
Elementary Education	8	8.7
Electrical Engineering	3	3.3
Electrical Technology	1	1.1
Family Science	2	2.2
Fashion Merchandise	1	1.1
Fine Arts	2	2.2
Geography	1	1.1
Health Education	2	2.2
Health Science	1	1.1
Home Economic Education	1	1.1
International Relations	1	1.1
Justice Administration	2	2.2
Math	1	1.1
Medical Technology	3	3.3
Microbiology	2	2.2
Music	1	1.1
Nursing	3	3.3
Nutrition	1	1.1
Political Science	1	1.1
Pre Chiropractice	1	1.1
Pre Med	1	1.1
Public Administration	1	1.1
Secondary Education	1	1.1
Social Work	2	2.2
Spanish	1	1.1
Sports Medicine	1	1.1

Table 3

(Continued)

Major		Frequency	Valid Percent
Travel and Tourism		1	1.1
Undecided		17	18.5
Zoology		1	1.1
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 4

Tribe

Tribe		Frequency	Valid Percent
Blackfoot		1	1.1
Catawba		1	1.1
Cherokee		1	1.1
Cheyenne River		1	1.1
Chippewa		1	1.1
Crow		1	1.1
Hopi		1	1.1
Iroqois Cayuga		1	1.1
Lumbee		1	1.1
Mohawk		3	3.3
Navajo		56	60.8
Omaha		1	1.1
Oneida		4	4.3
Santa Clara		1	1.1
Santa Domingo		1	1.1
Seneca		1	1.1
Shoshone		2	2.1
Ute		1	1.1
Zuni		2	2.1
Apache/Pueblo		1	1.1
Iroqois/Seneca		1	1.1
Navajo/Apache		1	1.1
Navajo/Hopi		1	1.1
Navajo/Mohawk		1	1.1
Navajo/Shoshone		2	2.1
Shoshone/Bannock		1	1.1
Shoshone/Paiute		1	1.1
Tsimshian		1	1.1
Winnebego/Paiute		1	1.1
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 5

Home State

State		Frequency	Valid Percent
Arizona		24	26.7
California		4	4.5
Minnesota		1	1.1
Montana		2	2.2
Nebraska		1	1.1
Nevada		4	4.5
New Mexico		25	27.8
New York		5	5.6
North Carolina		1	1.1
Ohio		1	1.1
South Carolina		1	1.1
South Dakota		3	3.3
Texas		1	1.1
Utah		13	14.0
Virginia		1	1.1
Wisconsin		1	1.1
Wyoming		1	1.1
*		2	Missing
	Total	92	100.0

Valid Cases 90 Missing Cases 2

* = No response or missing

Table 6

Town or City

Town or City	Frequency	Valid Percent
Cameron, AZ	1	1.2
Chinle, AZ	2	2.4
Cottonwood, AZ	1	1.2
Dinnebeto, AZ	1	1.2
Flagstaff, AZ	2	2.4
Fort Defiance, AZ	1	1.2
Inscription House, AZ	1	1.2
Kaibeto, AZ	1	1.2
Many Farms, AZ	1	1.2
Navajo Mountain, AZ	1	1.2
Saw Mill, AZ	1	1.2
Snowflake, AZ	2	2.4
Tec Nas Pos, AZ	1	1.2
Tsaile, AZ	1	1.2
Tuba City, AZ	4	5.0
Window Rock, AZ	2	2.4
Alpine, CA	1	1.2
Citrus Heights, CA	1	1.2
Dagget, CA	1	1.2
San Bernardino, CA	1	1.2
Eden Prairie, MN	1	1.2
Browning, MT	1	1.2
Hardin, MT	1	1.2
Maxton, NC	1	1.2
Macy, NE	1	1.2
Albuquerque, NM	1	1.2
Crownpoint, NM	2	2.4
Farmington, NM	3	3.6
Fruitland, NM	2	2.4
Gallup, NM	3	3.6
Sanostee, NM	1	1.2
Santa Clara, NM	1	1.2
Shiprock, NM	5	6.0
Tohatchi, NM	1	1.2
Tse Bonito, NM	1	1.2
Vandewagon, NM	1	1.2
Zuni, NM	2	2.4
Elko, NV	2	2.4
Nixon, NV	1	1.2
Reno, NV	1	1.2
Buffalo, NY	1	1.2

Table 6

(Continued)

Town or City	Frequency	Valid Percent
Gowanda, NY	1	1.2
Rochester, NY	1	1.2
Cleveland, OH	1	1.2
Rockhill, SC	1	1.2
Eagle Butte, SD	1	1.2
Mclaughlin, SD	1	1.2
Rapid City, SD	1	1.2
Henderson, TX	1	1.2
Blanding, UT	3	3.6
Lehi, UT	1	1.2
Montezuma Creek, UT	1	1.2
Monument Valley, UT	1	1.2
Orem, UT	1	1.2
Provo, UT	1	1.2
Tooele, UT	1	1.2
West Jordan, UT	1	1.2
West Valley City, UT	1	1.2
White Rock, UT	1	1.2
Cherokee, VA	1	1.2
Oneida, WI	1	1.2
Ft. Washakie, WY	1	1.2
*	9	Missing
Total	92	100.0

Valid Cases 83 Missing Cases 9

* = No response or missing

Table 7

Student Status

Value Label		Frequency	Valid Percent
Full-time		92	100.0
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 8

Religion

Value Label		Frequency	Valid Percent
LDS		84	91.3
Non-LDS		8	8.7
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 9

Degree Indian Blood

Value Label		Frequency	Valid Percent
Greater than 1/4		92	100.0
Less than 1/4		0	Missing
	Total	92	100.0

Valid Cases 92 Missing Cases 0

Note: Questions 1-24 will have the following key:

1 = Not Important Reason
2 = Somewhat Important Reason
3 = Important Reason
4 = Major Reason

Table 10a

Question 1. Industrial Education graduation requirements are too hard.

Value Label		Frequency	Valid Percent
1		78	84.8
2		9	9.8
3		1	1.1
4		3	3.3
*		1	Missing
	Total	92	100.0

Valid Cases 92 Missing Cases 1

* = No response or missing

Table 10b

Question 2. Did not know there was a major in Industrial Education.

Value Label		Frequency	Valid Percent
1		45	48.9
2		12	13.0
3		12	13.0
4		23	25.0
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 10c

Question 3. Have no interest in Industrial Education.

Value Label		Frequency	Valid Percent
1		25	27.5
2		21	23.1
3		15	16.5
4		30	33.0
*		1	Missing
	Total	92	100.0
Valid Cases 91	Missing Cases	1	

* = No response or missing

Table 10d

Question 4. Have no interest in teaching Industrial Education.

Value Label		Frequency	Valid Percent
1		19	20.7
2		19	20.7
3		17	18.5
4		37	40.2
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 10e

Question 5. High school Industrial Education classes are not considered college preparation classes.

Value Label		Frequency	Valid Percent
1		55	59.8
2		17	18.5
3		10	10.9
4		10	10.9
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 10f

Question 6. There are very limited job opportunities in Industrial Education.

Value Label		Frequency	Valid Percent
1		54	59.3
2		14	15.4
3		15	16.5
4		8	8.8
*		1	Missing
	Total	92	100.0

Valid Cases 91 Missing Cases 1

* = No response or missing

Table 10g

Question 7. Industrial Education classes are for low achieving students.

Value Label		Frequency	Valid Percent
1		72	80.0
2		12	13.3
3		5	5.6
4		1	1.1
*		2	Missing
	Total	92	100.0

Valid Cases 90 Missing Cases 2

* = No response or missing

Table 10h

Question 8. Industrial Education is not on the list of priorities for my tribe's higher education department.

Value Label		Frequency	Valid Percent
1		64	69.6
2		10	10.9
3		10	10.9
4		8	8.7
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 10i

Question 9. The math requirements for Industrial Education are too difficult.

Value Label		Frequency	Valid Percent
1		72	78.3
2		11	12.0
3		5	5.4
4		4	4.3
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 10j

Question 10. Industrial Education classes are too technical.

Value Label		Frequency	Valid Percent
1		61	67.0
2		20	22.0
3		5	5.5
4		5	5.5
*		1	Missing
	Total	92	100.0

Valid Cases 91 Missing Cases 1

* = No response or missing

Table 10k

Question 11. Am still undecided about a major.

Value Label		Frequency	Valid Percent
1		67	73.6
2		8	8.8
3		5	5.5
4		11	12.1
*		1	Missing
	Total	92	100.0

Valid Cases 91 Missing Cases 1

* = No response or missing

Table 101

Question 12. An answer to prayer has directed me toward a different major.

Value Label		Frequency	Valid Percent
1		75	82.4
2		7	7.7
3		4	4.4
4		5	5.5
*		1	Missing
	Total	92	100.0

Valid Cases 91 Missing Cases 1

* = No response or missing

Table 10m

Question 13. My parents encouraged me to study in a different field.

Value Label		Frequency	Valid Percent
1		68	74.7
2		8	8.8
3		9	9.9
4		6	6.6
*		1	Missing
	Total	92	100.0

Valid Cases 91 Missing Cases 1

* = No response or missing

Table 10n

Question 14. There are higher salaries in a different field.

Value Label		Frequency	Valid Percent
1		36	39.6
2		20	22.0
3		16	17.6
4		19	20.9
*		1	Missing
	Total	92	100.0

Valid Cases 91 Missing Cases 1

* = No response or missing

Table 10o

Question 15. I knew someone I respected very much (a role model) that was in a different field.

Value Label		Frequency	Valid Percent
1		57	62.6
2		11	12.1
3		10	11.0
4		13	14.3
*		1	Missing
	Total	92	100.0

Valid Cases 91 Missing Cases 1

* = No response or missing

Table 10p

Question 16. I have no talent in Industrial Education.

Value Label		Frequency	Valid Percent
1		53	58.2
2		19	20.9
3		11	12.1
4		8	8.8
*		1	Missing
	Total	92	100.0
Valid Cases 91	Missing Cases	1	

* = No response or missing

Table 10q

Question 17. I have had no experience in Industrial Education.

Value Label		Frequency	Valid Percent
1		42	45.7
2		19	20.7
3		10	10.9
4		21	22.8
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Note: For Questions 18-24, 0 does not apply.

Table 10r

Question 18. I did not like my high school shop teacher.

Value Label		Frequency	Valid Percent
0		43	48.9
1		41	46.6
2		3	3.4
3		1	1.1
*		4	Missing
	Total	92	100.0

Valid Cases 88 Missing Cases 4

* = No response or missing

Table 10s

Question 19. I took Industrial Education class(es) only as fun class(es).

Value Label		Frequency	Valid Percent
0		43	48.3
1		16	18.0
2		13	14.6
3		7	7.9
4		10	11.2
*		3	Missing
	Total	92	100.0

Valid Cases 89 Missing Cases 3

* = No response or missing

Table 10t

Question 20. Industrial Education classes are for men.

Value Label	Frequency	Valid Percent
0	39	50.6
1	28	36.4
2	5	6.5
3	1	1.3
4	4	5.2
*	15	Missing
Total	92	100.0

Valid Cases 77 Missing Cases 15

* = No response or missing

Table 10u

Question 21. Girls were not allowed to take high school shop classes in my high school.

Value Label	Frequency	Valid Percent
0	39	50.6
1	31	40.3
2	1	1.3
3	2	2.6
4	4	5.2
*	15	Missing
Total	92	100.0

Valid Cases 77 Missing Cases 15

* = No response or missing

Table 10v

Question 22. I do not want to teach boys.

Value Label	Frequency	Valid Percent
0	39	50.6
1	33	42.9
2	2	2.6
3	1	1.3
4	2	2.6
*	15	Missing
Total	92	100.0

Valid Cases 77 Missing Cases 15

* = No response or missing

Table 10w

Question 23. There are very few girls in Industrial Education.

Value Label	Frequency	Valid Percent
0	50	58.8
1	26	30.6
2	5	5.9
3	3	3.5
4	1	1.2
*	7	Missing
Total	92	100.0

Valid Cases 85 Missing Cases 7

* = No response or missing

Table 10x

Question 24. My patriarchal blessing mentioned a different major.

Value Label		Frequency	Valid Percent
0		8	9.1
1		72	81.8
2		4	4.5
3		1	1.1
4		3	3.4
*		4	Missing
	Total	92	100.0

Valid Cases 88 Missing Cases 4

* = No response or missing

Table 11

Question 25. Reasons Not Included in Survey (Open-Ended Responses)

Reason
Lack of Interest
Not thought much of Industrial Education.
Not interested.
Not interested as a major.
Always interested in another field.
Not field of interest—never informed of such an area.
Not interested.
Industrial Education never came to mind.
No interest in Industrial Education.
Never taken class so not developed an interest.
Never thought about it, high interest in math.
Not much for manual labor.
Was never around people of this interest.
Doesn't fit my personality or outlook in life.
Had exposure but was encouraged elsewhere.
Values aimed towards another major.
Lack of Information
Didn't know if electronics was part of Industrial Education.
Didn't know shop was part of Industrial Education.
Didn't think of Industrial Education as a major.
Never heard of Industrial Education as a major.
Until past couple of years no knowledge of Industrial Education.
Math and computer world—technology of today.
Don't know about it.
Didn't know of its existence.
Would if Industrial Education included graphic arts and communication.
Not sure what the specific field is.
Design technology classes in design, manufacturing, electronics, and civil engineering. I feel my major is technically oriented towards the industrial field.
Help people, associate with people.
Wants to help Indian students with emotional problems.
Higher Salary in a Different Field
Interested in business and making big bucks.
Not good paying job.
I like high paying jobs, wearing a suit.
Industrial Education classes are fun and I am good in it, but not high paying career.

Table 11

(Continued)

Reason
Fun or Hobby
Wanted something different than _____ like working with hands. Looking toward Industrial Education, I love to draft, but that's all I want to do and if I go through the program I would have to take all the shop classes.
Do it as hobby, not for survivorship.
Not interested, only as a hobby.
Undecided About Major
Not yet certain of major.
Mind Made Up Earlier and Decided on a Major Previously
Already decided on civil engineering as a major.
Decided before getting to college.
Mind set on business.
Established career goal at early age, want to be elementary teacher.
Decided before coming to BYU.
Wanted elementary education for major.

Table 12

Question 26. I had a class in Industrial Arts (shop class) in high school.

Value Label	Frequency	Valid Percent
Yes	40	44.0
No	51	56.0
*	1	Missing
Total	92	100.0

Valid Cases 91 Missing Cases 1

* = No response or missing

Table 13

Question 27. Type of Industrial Arts Class Taken

Class	Frequency	Valid Percent
Wood	31	41.3
Drafting	12	16.0
Auto	10	13.3
Welding	7	9.3
Machine Shop	5	6.7
Metal	5	6.7
Electronics	3	4.0
Plastic	1	1.3
Tools and Equipment	1	1.3
Total	75	100.0

Valid Cases (not applicable) Missing Cases (not applicable)

Table 14

Question 28. Have you ever had an Industrial Education teacher who was an American Indian?

Value Label		Frequency	Valid Percent
Yes		4	4.4
No		86	95.6
*		2	Missing
	Total	92	100.0
Valid Cases 90	Missing Cases	2	

* = No response or missing

Table 15

Question 29. Where American Indian Teacher Received Degree

Where		Frequency	Valid Percent
Phoenix Institute of Technology		1	1.1
No response		91	98.9
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 16

Question 30. Did you attend a high school located on the reservation?

Value Label		Frequency	Valid Percent
Yes		24	27.0
No		65	73.0
*		3	Missing
	Total	92	100.0
Valid Cases 89	Missing Cases	3	

* = No response or missing

Table 17

Question 31. How many years did you attend a high school located on the reservation?

Value Label		Frequency	Valid Percent
Number of Years	0	65	73.0
	1	8	9.0
	2	1	1.1
	3	3	3.4
	4	12	13.5
	*	3	Missing
	Total	92	100.0
Valid Cases 89	Missing Cases	3	

* = No response or missing

Table 18

Question 32. Did you attend a high school located near the reservation (about 30 miles)?

Value Label		Frequency	Valid Percent
Yes		30	32.6
No		62	67.4
	Total	92	100.0
Valid Cases 92	Missing Cases	0	

Table 19

Question 33. Did counselors in high school suggest Industrial Education as an option?

Value Label		Frequency	Valid Percent
Yes		19	21.3
No		70	78.7
*		3	Missing
	Total	92	100.0
Valid Cases 89	Missing Cases	3	

* = No response or missing

Table 20

Question 34. Have counselors at BYU ever suggested Industrial Education as an option?

Value Label	Frequency	Valid Percent
Yes	2	2.2
No	87	97.8
*	3	Missing
Total	92	100.0

Valid Cases 89 Missing Cases 3

* = No response or missing

Table 21

Question 35. Were you on the placement program?

Value Label	Frequency	Valid Percent
Yes	42	45.7
No	50	54.3
Total	92	100.0

Valid Cases 92 Missing Cases 0

Table 22

Question 36. How many years were you on the placement program?

Value Label		Frequency	Valid Percent
Number of Years	0	50	54.3
	1	2	2.2
	2	5	5.4
	3	3	3.3
	4	4	4.3
	5	4	4.3
	6	3	3.3
	7	4	4.3
	8	4	4.3
	9	3	3.3
	10	7	7.6
	11	2	2.2
	14	1	1.1
	Total	92	100.0
Valid Cases 92		MIssing Cases 0	

Table 23

Question 37. Were you in the placement program when you graduated from high school?

Value Label		Frequency	Valid Percent
Yes		51	55.4
No		34	37.0
	Total	92	100.0
Valid Cases 92		Missing Cases 0	

REFERENCES CITED

Bennett, Charles Alpheus. History of Manual and Industrial Education Up to 1870. Peoria, Illinois: The Manual Arts Press, pp. 13-17, 106-126.

Canyon, Elwood. Tape Recorded Interview About Practical Arts. Lehi, Utah, 27 July 1983.

Deloria, Vine, Jr. The Indian Affairs. New York: Friendship Press, 1974, pp. 79-87.

Encyclopedia Americana, Vol. 10. "Eskimo." Danbury, Connecticut: Grolier Incorporated, p. 571.

Freuchen, Peter. Book of Eskimos. Greenwich, Conn.: Fawcett Publications, 1961, pp. 14-15.

Frison, George C. (ed.). The Casper Site (A Hell Guys Bison Kill on the High Plains). New York, San Francisco, London: Academic Press, 1974, pp. 30-102.

Goto, Kent Asa. A Study of Problems in Recruiting Minority People Into Industrial Arts for the Western States of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. Ann Arbor, Michigan, U.S.A., London, England: University Microfilms International, 1978.

Kurten, Bjorn, and Anderson, Elaine. Pleistocene Mammals of North America. New York: Columbia University Press, 1980, pp. 352-353.

Leake, Albert H. Industrial Education: Its Problems, Methods, and Dangers. Boston and New York: Houghton Mifflin Company, 1913, p. 10.

Monroe, Paul (ed.). A Cyclopedia of Education, Vol. 3. New York: The Macmillan Company, 1912, pp. 418-19.

National Geographic Society. The World of the American Indian. Washington D.C.: National Geographic Society, 1974, p. 38.

Pratt, Richard Henry. Edited by Robert M. Utley. Battle Field and Classroom. New Haven and London: Yale University Press, 1964, pp. 191, 212-339.

Ritzenthaler, Robert E. Prehistoric Indians of Wisconsin. Wisconsin: Order of Board of Trustees, 1967.

Simmons, Jeff L. and John R. Maestas. The Lamanite—Past, Present, Future. Provo, Utah: Brigham Young University, 1978, pp. 1-546.

Stuart, George E., and Stuart, Gene S. Discovering Man's Past in the Americas. Washington, D.C.: The National Geographic Society, 1969, p. 41.

The Superintendent of Documents. The American Indians' Answers to 101 Questions. Washington, D.C.: U.S. Government Printing Office, 1974.

BIBLIOGRAPHY

Barlow, Melvin L. History of Industrial Education in the United States. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1967.

Brose, David S.; Brown, James A.; and Penny, David W. Ancient Art of the American Woodland Indians. New York: Harry N. Abrams, Inc., in association with the Detroit Institute of Arts, 1985.

Cohen, Sol (ed.). The Indian Education in the United States: A Documentary History, Vol 1. New York: Random House, pp. 602-627.

Dooley, William H. Principles and Methods of Industrial Education for Use in Teacher Training Classes. Cambridge, Massachusetts: Houghton Mifflin Company, The Riverside Press, 1919.

Jett, Stephen C., and Spencer, Virginia E. Navajo Architecture. Tucson: University of Arizona Press, 1981.

Kerschensteiner, George. The Idea of the Industrial School. Translated by Rudolf Pintmer. New York: The Macmillan Company, 1913.

McMillan, James H., and Schumacher, Sally. Research in Education: A Conceptual Introduction. Boston, Toronto: Little, Brown and Company, 1984.

Newcomb, Franc Johnson. Navajo Omens and Taboos. Santa Fe, New Mexico: Rydal Press, 1940.

Row, Robert Keable. The Educational Meaning of Manual Arts and Industries. Chicago: Row, Petersen and Company, 1909.

Sadalla, Edward K.; Snyder, Peter A.; and Stea, David. Sociocultural Modifications and User Needs in Navajo Housing. Los Angeles: School of Architecture and Urban Planning, University of California at Los Angeles, 1977.

REASONS AMERICAN INDIAN STUDENTS DO NOT TYPICALLY CHOOSE INDUSTRIAL EDUCATION AS A MAJOR AT BYU

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M.S. Degree, April 1986

ABSTRACT

It was the purpose of this study to examine reasons why American Indian students do not typically choose Industrial Education as a major at BYU. To identify reasons American Indian students do not typically choose Industrial Education as a major, a questionnaire was developed. This questionnaire obtained data about personal information, reasons for not choosing Industrial Education as a major, reasons not included in the survey, Industrial Education background, and other general information related to the study. The questionnaire was administered on and off BYU campus to 122 identified American Indian students. Ninety-two students completed and returned the survey, which is 75 percent of the total survey population.

Based on the results of this study, the following reasons were considered influential factors in determining why American Indian students do not choose Industrial Education as a major at BYU: lack of interest, lack of information, role models in different fields, lack of talent, lack of experience, limited job opportunities, and higher salaries in other majors.

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