ATTITUDES OF FRESHMEN IN SAUDI TECHNICAL COLLEGES TOWARD
VOCATIONAL-TECHNICAL EDUCATION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
The Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
Saleh N. Alandas, M.A.

The Ohio State University
2002

Dissertation Committee: Approved by
Dr. R. C. Bates, Adviser
Dr. David Stein
Dr. Wesley E. Budke

Adviser
College of Education
In Saudi Arabia, there is a clear, and general, shortage of technical and vocational manpower. The shortage in the country’s manpower indicates that there is a gap between workforce needs and trained personnel. This gap created through a prolonged history of bad image for manual jobs. Lately, however, many Saudi students are interested in vocational higher education. The recent interest in vocational-technical education suggests a promising shift in students' attitudes toward vocational-technical education. The purpose of this study is to examine the attitudes of freshmen, in Saudi Technical Colleges, toward vocational-technical education.

The dependant variable for this study is: The attitudes of Saudi freshmen in technical colleges toward vocational-technical education. The independent variables are in the following categories: Freshmen's religious beliefs; freshmen’s traditions and customs; freshmen’s perceptions of vocations; parent’s occupations and education; freshmen's perceptions of people around them (friends, teachers and parents) attitudes toward vocational-technical education; type of high school attended (academic or technical high school), birthplace size, socioeconomic status, and age.
DEDICATION

To my parents who have always believed in me and who have given me the courage to believe in myself;

To my wife whose unconditional support and patience has made it easy for me to accomplish this objective in my life;

To my kids who sacrifice a lot in being away from their family and friends.
ACKNOWLEDGMENT

First of all, I am grateful to my lord who gave me the will and the patience to complete my studies. Then, I have a lot of gratitude for the following people who have supported me throughout this prolong process. Special thanks go to my advisor, Dr. R.C. Bates, for his constant support, guidance, time and patience during this research. I would like to express my sincere gratitude to the remaining members of my dissertation committee. Dr. David Stein and Dr. Wesley Budke, for their support and unconditionally sharing of their knowledge and experience which has allowed me to grow throughout my doctoral program. Special thanks are expressed, also, to Dr. Anthony Olinzock, Dr. Ray Ryan and Gayl Ray, for their constant support through my graduate studies.

My heart feels deeply thankful to my parents, brothers and sisters, whose love for me has been evident during all these years that I have been away from my home country.

Last but certainly not least, a very special thank you to my beloved wife and kids for their willingness to help and sacrifice in any way possible and their continued support which was always present during the long period of waiting and sacrifices.
VITA

November, 28 1962

1984

1985-1994

1996

Born, Alrass, Saudi Arabia

B.A. King Saud University

Training Manager, Saudi Telecom (Ministry of Post, Telegraph and Telephone)

M.A. Ohio State University

FIELDS OF STUDY

Major Field of Study: Education

Major Field: Vocational-Technical Education

Professors Anthony Olinzock and Wesley Budke

Minor Field: Research

Professors R.C. Bates, Janet Henderson, David Stein and Robert Warmbroad

Minor Field: Curriculum Development

Professors Ray Ryan and Gayl Ray

Minor Field: Technology Education

Professors Michael Scott and Paul Post
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Content</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>iv</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>v</td>
</tr>
<tr>
<td>VITA</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>x</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xi</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>12</td>
</tr>
<tr>
<td>Background of the Problem</td>
<td>12</td>
</tr>
<tr>
<td>History of Vocational-Technical Education in Saudi Arabia</td>
<td>14</td>
</tr>
<tr>
<td>Significance of the Problem</td>
<td>18</td>
</tr>
<tr>
<td>Statement of Purpose</td>
<td>23</td>
</tr>
<tr>
<td>Research Objectives</td>
<td>24</td>
</tr>
<tr>
<td>Research Questions</td>
<td>25</td>
</tr>
<tr>
<td>Study Procedures:</td>
<td>26</td>
</tr>
<tr>
<td>Delimitations</td>
<td>28</td>
</tr>
<tr>
<td>Limitations</td>
<td>28</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>29</td>
</tr>
<tr>
<td>2. REVIEW OF RELATED LITERATURE</td>
<td>32</td>
</tr>
<tr>
<td>Introduction</td>
<td>32</td>
</tr>
<tr>
<td>Theoretical Framework</td>
<td>33</td>
</tr>
<tr>
<td>Attitude Theories</td>
<td>37</td>
</tr>
</tbody>
</table>
Attitudinal Change .............................................................................. 39
Personality Oriented Approach .......................................................... 40
Group Oriented Approach .................................................................. 42
Membership and Reference Groups ...................................................... 43
Public (Society) Traditions and Customs .............................................. 44
Religious Belief .................................................................................. 48
Parent, Friends and Teachers Attitude .................................................. 51
Global Attitude toward Vocational-technical Education ....................... 53

3. METHODOLOGY ............................................................................... 56
   Introduction .................................................................................... 56
   Population and Sample ..................................................................... 56
   Research Design .............................................................................. 58
   Instrumentation .............................................................................. 60
   Validity and Reliability ................................................................... 64
   Data collection ............................................................................... 66
   Data Analysis .................................................................................. 68

4. RESEARCH FINDINGS AND DISCUSSION........................................ 70
   Introduction .................................................................................... 70
   Research Questions ......................................................................... 72
   Survey Response ............................................................................ 73
   Discussion of Findings ..................................................................... 73
   Research Objective 1 ...................................................................... 74
   Research Objective 2 ...................................................................... 89
   Research Objective 3 ...................................................................... 93
   Research Objective 4 ..................................................................... 109
   Research Objective 5 ..................................................................... 114
5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .......... 122

Introduction .......................................................................................................... 122
Summary ................................................................................................................ 122
Conclusions .......................................................................................................... 130
Recommendations ............................................................................................... 138

6. LIST OF REFERENCES .................................................................................. 142

7. APPENDICES ............................................................................................... 149

A. Survey Instrument .......................................................................................... 150
B. Panel of Experts ............................................................................................ 158
C. Cover Letter to Saudi Technical Colleges ..................................................... 160
D. Cover Letter to Freshmen at Saudi Technical Colleges ............................... 162
E. Second Letter to Saudi Technical Colleges .................................................. 164
F. Final Letter to Saudi Technical Colleges ....................................................... 166
<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1: Dependent &amp; independent variables</td>
<td>31</td>
</tr>
<tr>
<td>1.2: Research map of the study theoretical framework</td>
<td>36</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1.1: Students enrolled in and graduated from Saudi Technical colleges; GOTEVT, 1994.</td>
<td>22</td>
</tr>
<tr>
<td>Table 3.1: Sample proportions of the population (n=375)</td>
<td>58</td>
</tr>
<tr>
<td>Table 3.2: Research questions cross-referenced to survey items</td>
<td>63</td>
</tr>
<tr>
<td>Table 3.3: Instrument reliability test (test/retest)</td>
<td>66</td>
</tr>
<tr>
<td>Table 4.1: Descriptive statistics of age</td>
<td>75</td>
</tr>
<tr>
<td>Table 4.2: Frequency distribution of age</td>
<td>76</td>
</tr>
<tr>
<td>Table 4.3: Frequency distribution of city size</td>
<td>77</td>
</tr>
<tr>
<td>Parents' Characteristics</td>
<td>78</td>
</tr>
<tr>
<td>Table 4.4: Frequencies of fathers' job type</td>
<td>79</td>
</tr>
<tr>
<td>Table 4.5: Frequencies of freshmen's fathers' employer</td>
<td>80</td>
</tr>
<tr>
<td>Table 4.6: Frequencies of mothers' job type</td>
<td>81</td>
</tr>
<tr>
<td>Table 4.7: Frequencies of mothers' employer</td>
<td>82</td>
</tr>
<tr>
<td>Table 4.8: Freshmen's fathers' level of education</td>
<td>83</td>
</tr>
<tr>
<td>Table 4.9: Mothers' level of education</td>
<td>84</td>
</tr>
<tr>
<td>Table 4.10: Parents' level of education</td>
<td>85</td>
</tr>
<tr>
<td>Table 4.11: Freshmen's family annual income</td>
<td>87</td>
</tr>
<tr>
<td>Table 4.12: Freshmen's high school type</td>
<td>89</td>
</tr>
</tbody>
</table>
Table 4.13: Description of Likert-type question mean value on the scale of students’ attitudes toward vocational-technical education

Table 4.14: Reasons for freshmen to enroll in Technical Colleges

Table 4.15: Demographic characteristics, freshmen’s attitudes and correlation coefficients employed.

Table 4.16: Correlation coefficients and the description of the magnitude of their relationships

Table 4.17: Correlation between student attitude toward vocational-technical education and demographic characteristics

Table 4.18: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their age

Table 4.19: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their city size

Table 4.20: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their fathers’ job type

Table 4.21: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their fathers’ employer

Table 4.22: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their mothers’ job type

Table 4.23: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their mothers’ employer

Table 4.24: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their family income

Table 4.25: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their fathers’ education

Table 4.26: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their mothers’ education
Table 4.27: Analysis of variance (ANOVA) between freshmen's attitudes toward vocational-technical education and their high school type................................................................. 109

Table 4.28: Correlation between student attitudes toward vocational-technical education and their religious beliefs, customs & vocations...... 111

Table 4.29: Description of Likert-type question mean value on the scale of freshmen's customs' and traditions' appreciations....................... 112

Table 4.30: Description of Likert-type question mean value on the scale of the attitudes of the people around the freshmen toward vocational-technical education. ......................................................... 115

Table 4.31: Attitudes of the people around freshmen toward vocational-technical education. ............................................................ 116

Table 4.32: Correlations coefficients between freshmen's attitudes and the attitudes of the people around them (teachers, parents, and friends) toward vocational-technical education............................. 118

Table 4.33: Results of multiple regressions equation of the dependent variable on the independent variables................................. 119

Table 4.34: Standardized and unstandardized coefficients of student attitudes on religion, customs perceptions mother job type and other peoples' attitudes.................................................. 121
CHAPTER 1

INTRODUCTION

Background of the Problem

The Saudi Arabian economy depends heavily on a core of foreign workers cutting across all sectors and skill levels. The high economic growth resulting from the oil boom in the 1970s and 1980s caused a major shortage in the number of national workers needed to support the country’s development. Thus, in the mid-1990s, around 60% of the working population is foreign (Mellahi, 2000). It is reported that foreign workers’ transfer of funds outside the country are draining the economy. Azzam (1997) has been cited in Mellahi (2000) stating that 40% of Saudi oil revenue leaves the country in the form of remittances every year.

Although, vocational-technical jobs are among the highest-paying jobs in Saudi Arabia, many of these vocational-technical jobs remain unfilled. The main reason for such a situation is that few Saudis have the necessary training for these types of jobs, and few are seeking this important kind of training (Alghofaily, 1980). Therefore, vocational schools are continually trying to attract students. Meanwhile, academic schools cannot accommodate all of the students who want a college-preparatory education (Alghofaily, 1980).
Researchers in the 1970s and 1980s identified reasons for student avoidance of vocational-technical education in Saudi Arabia. Some have tied it to the social codes in Saudi Arabia that consider manual workers (hands-on jobs) a lower class than office workers (Raddady, 1977). Mellahi (2000) explained this notion of hands-on jobs by stating that Saudi Arabian society holds a negative perception of skilled and manual work. This view of manual work negatively affects their attitude toward hands-on vocations, and ultimately, their attitude toward vocational-technical education (Mellahi, 2000; Alkhaldi, 1997; Alghofaily, 1980; Raddady, 1977).

Others point out that avoidance of vocational-technical education was a function of government employment, which is considered more attractive than private sector employment (Mellahi, 2000; Alkhaldi, 1997; Alaki, 1972). Most Saudis prefer to work in government jobs rather than in the private sector because government jobs, usually office jobs, offer greater job security and better working conditions than private-sector jobs (Alaki, 1972). Mellahi (2000) mentions that Saudi Arabian families take pride in working in the prestige sectors (i.e., administrative work in the public sector).

During the past decade there has been an effort to encourage students in Saudi Arabia to enroll in vocational-technical education. A positive impact can be seen in the enrollment of Saudi high school students in technical colleges. Many Saudi high school students chose to enter a technical college rather than the university (GOTEVT, 1994).
This research will investigate the recent influence of that effort to persuade Saudi students in general, and high school students in particular, to enroll in vocational-technical education. In this study, factors that might be related to Saudi students’ attitude toward vocational-technical education will be examined. Examples of variables to be studied include social traditions and customs, religious beliefs, parents', teachers', and friends’ attitudes.

History of Vocational-Technical Education in Saudi Arabia

The Kingdom of Saudi Arabia comprises almost four-fifths of the Arabian Peninsula, an area approximately one-third the size of the continental United States. Geographically, the Arabian Peninsula is situated in the southwestern part of Asia. Formal primary education began in Saudi Arabia in the 1930s. In 1945, an extensive program was introduced to establish schools throughout the Kingdom. Six years later, in 1951, the country had 226 schools with 29,887 students enrolled (The Embassy of Saudi Arabia in the U.S., 1999).

Today, Saudi Arabia's nationwide educational system includes seven universities, 83 colleges and more than 18,000 schools. Open to every citizen, the system provides students with free education. Universities and colleges cover most of the areas of education including technical and vocational training (The Embassy of Saudi Arabia in the U.S., 1999).

Saudi Arabia's seven universities are in different locations of the country. The higher education system prepares students to be enrolled in most of the
country's workforce specialties. Recently, graduate programs (MA, MS and Ph.D.) have been established in some Saudi universities in order to fulfill the country's needs in the area of higher education. Most of the current Saudi manpower graduated from these universities (The Embassy of Saudi Arabia in the U.S., 1999).

Vocational-technical education in Saudi Arabia has been distributed among different Saudi government agencies. Technical programs in different specialties (industrial, commercial, and agriculture) have been under the Saudi Department of Education. Vocational training, however, has been separated from technical education and has been located in the Saudi Workforce and Social Affairs Department (GOTEVT, 1994).

The first vocational-technical school in Saudi Arabia was established in 1950. The school, known as an intermediate industrial school, offered a three-year course of study for graduates of elementary school. In 1960, the first secondary industrial school was opened. This school accepted students who had graduated from either intermediate industrial or academic schools (Ministry of Higher Education, 1999). During the 1960s, with the country's development due to the oil discovery, technical education and vocational training expanded to cover other related areas, such as the technical supervisors' programs. Nationally qualified technical supervisors were needed in land survey and city construction areas. In 1965, the first Technical Supervisors' Secondary School was opened in Riyadh (the capital of Saudi Arabia). Four similar schools were also opened in other
Saudi cities. The last Technical Supervisors Secondary School was opened in 1993 (GOTEVT, 1994).

Vocational-technical education/training has continued to gain importance in Saudi Arabia. Many vocational training centers have been established in the country. Currently, vocational training centers are distributed in 30 different cities in Saudi Arabia. During the 1970s, most vocational centers were opened in response to the increased need for a workforce trained in vocational skills. At that time, many students did not complete their normal (academic) education, which led them to enroll in vocational training centers to secure decent jobs (GOTEVT, 1996). However, in general, students were not motivated otherwise to enroll in vocational-technical education. Between 1954 and 1980, about 5,500 students graduated from vocational-technical schools, a number much lower than government expectations (GOTEVT, 1994).

Therefore, in 1980, after a thorough study of human resources requirements and the vocational-technical education situation in Saudi Arabia, the government decided to combine all vocational-technical training centers and schools that had been scattered throughout different governmental agencies into one government-run agency. The name of that agency is the General Organization for Technical Education and Vocational Training (GOTEVT). The main objective for GOTEVT is to be responsible for the formation and implementation of manpower development plans in Saudi Arabia (GOTEVT, 1994). The manpower development plans, designed and implemented by GOTEVT, are suppose to
cover all different levels of the country's workforce needs-starting from the simple technician jobs up to the high sophisticated technological jobs.

In 1983, government officials realized the need for a higher level of vocational-technical education (GOTEVT, 1994). The third Saudi Development Plan (1980-1985) prescribed that a technical college (community college) should be established with a 3,000-student capacity, as an experiment to evaluate the contribution of such an educational entity in providing the country with much-needed skilled manpower (Ministry of Higher Education, 1999). The main objective for such a college was to produce qualified human resources in different technical areas. The first technical college was established in Riyadh, called the College of Technology.

Today, the College of Technology in Riyadh offers eight technical specialties and two commercial ones. The technical subjects are: automobile mechanical technology, production technology, automobile electrical systems, electrical equipment systems, electrical instrument technology, industrial electronics technology, chemical lab technology, and A/C technology. Commercial subjects are taught in computer accountant and office administration (GOTEVT, 1994).

Students admitted to the college get housing and social services, SR 1000 ($267) monthly stipend, three daily meals and transportation to and from the college. After graduation, students have the opportunity to complete their bachelor degree, or are appointed to a government job, or get vocational government loans to establish their own businesses (GOTEVT, 1994).
By 1993, there were six technical colleges located throughout the country, and by 1999 the number had increased to ten (Mellahi, 2000). That growth, in the vocational higher education, indicates that there is a marked change in how vocational and technical education and employment are viewed in Saudi Arabia.

Significance of the Problem

In Saudi Arabia, there is a clear shortage of technical and vocational manpower in almost every economic sector (Alghofaily, 1980; Mellahi, 2000). The shortage in the country's manpower gives vocational-technical education special importance (GOTEVT, 1994). It indicates that there is a gap between workforce needs and trained personnel. Lately, however, many Saudi students graduating not only from vocational, but also from academic high schools are interested in vocational higher (technical college) education (GOTEVT, 1994). The recent interest in vocational-technical education suggests a shift in students' attitudes toward vocational-technical education (Alnais, 1991).

The fifth Saudi development plan (1990-1995) reveals that over the past 20 years, school enrollment at the elementary level increased 192 percent, 375 percent at the intermediate level, 712 percent at the secondary level, and 1,575 percent at the vocational-technical level (Ministry of Planning, 1990). The majority of students who enroll in vocational-technical education are at the college level (GOTEVT, 1994). Therefore, a study of the motives for that increase on vocational-technical education students number is needed.
It is possible to correlate the increased enrollment in technical colleges with the increased number of students graduating from high schools, which ultimately results in higher numbers of university admissions. Since the more academically oriented institutions limit the number of admissions, some students find themselves with the only alternative: technical college, or in a broader sense, "vocational education" (Alnais, 1991). Possibly, another reason for the increase in vocational-technical education enrollment might be changing societal attitudes toward vocational-technical education. Any change in society's traditions and customs toward vocational-technical education might be attributed to the private sector's interest in vocational trained students and the country's recent declining economic situation (Al-Ansari, 1997).

Lam (1982) designed a system to identify barriers to students' decisions to enroll in vocational-technical education. His system divides students' decisions into three categories: interpersonal reasons, influence of others, and remote external reasons. Interpersonal reasons include attitudes, perceptions, images, motivations, career maturity, and value systems. Influence of others means the influence of parents, friends, counselors, neighbors, and teachers. Remote external reasons include socioeconomic status, parental income, and parental educational level (Lam, 1982). Most barriers identified by Lam are applicable in Saudi Arabia. For example, Raddady (1977) reports on reasons why Bedouins look down upon manual work. Bedouins are the nomadic Arabs of the Arabian, Syrian, or African deserts (Merriam-Webster, 1999). Raddady (1977) explains
that Saudi Bedouins have developed certain principles and rules that constitute traditional ideals and virtues, without which a person is considered a non-effective member of society.

Bedouins' attitude toward work is not determined by the work's monetary inducement; rather their attitudes are determined by their own traditional values and norms (Alghofaily, 1980). Bedouin values and norms look down upon manual work and workers (Alghofaily, 1980). Mellahi (2000) elaborates on this point by saying: "Saudi Arabian families and Bedouin tribes take pride in not being involved in the so called downcast work..." As an example, even though the construction industry is one of the highest-paying industries, it attracts more non-Saudis than Saudis because Saudis, especially Bedouins, consider construction as less honorable employment (Alghofaily, 1980).

Another important consideration in the public's attitudes toward vocational-technical education is government jobs. Alaki (1972) notes that despite the fact that industry jobs pay more than government jobs in Saudi Arabia, government jobs are sought for the social prestige, shorter hours of work per day, and, above all, job security, since the Saudi government seldom fires employees.

Alkhaldi (1997) also explains that Saudis prefer office jobs rather than hands-on jobs, due to discrimination. Discrimination can be seen in two different aspects of the Saudis' daily life. The first aspect is social — which is related to tribal traditions and customs. Tribes could be defined as a social group comprising numerous families, clans, or generations together with slaves,
dependents, or adopted strangers (Merriam-Webster, 1999). Tribes in Saudi Arabia consider manual work fit only for those who have no tribal roots. If one of the tribal people accepts a manual job, the tribe immediately intervenes to reclaim him or her and save its members from this shameful deed. Otherwise, the tribe believes it would go down the social scale to join those with no tribal background, which is totally rejected by any tribe (Alkhaldi, 1997).

The second discriminatory aspect is one of vocational identification - where people call a person by the name of his or her job, such as the welder or the tailor. These names are not meant to distinguish people from one another, but rather to determine a person's level in the social scale, which is not high in the case of manual laborers (Alkhaldi, 1997).

Alghofaily (1980) indicates that in order to meet the national development goals in any country, the country must either import or educate/train its human resources. In the past, the Saudi technical workforce was insufficient because only a small percentage of Saudi students enrolled in a technical education school (Alghofaily, 1980). However, students have become more interested in vocational-technical education in recent years. Table 1.1 indicates that in 1984, the number of students who enrolled in technical (community) colleges was 91, while in 1994, the number jumped to 6,648 (GOTEVT, 1994). At the same time, the number of students who graduated from the colleges was 62 in 1985, while in 1994, the number of graduates reached 2,145 (Table 1.1). Enrollment and graduation rates are not similar during the period of 1984-1994, which could be
due to the policy of converting technical colleges from a 2-year college program to a 4-year bachelor program. Nevertheless, those rates indicate clearly the recent importance of vocational-technical education to the Saudi society in general and high school students in particular.

<table>
<thead>
<tr>
<th>Years</th>
<th>Students enrolled</th>
<th>Students graduated</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>91</td>
<td>-</td>
</tr>
<tr>
<td>1985</td>
<td>254</td>
<td>62</td>
</tr>
<tr>
<td>1986</td>
<td>241</td>
<td>71</td>
</tr>
<tr>
<td>1987</td>
<td>332</td>
<td>73</td>
</tr>
<tr>
<td>1988</td>
<td>887</td>
<td>100</td>
</tr>
<tr>
<td>1989</td>
<td>1,403</td>
<td>447</td>
</tr>
<tr>
<td>1990</td>
<td>2,247</td>
<td>479</td>
</tr>
<tr>
<td>1991</td>
<td>3,379</td>
<td>590</td>
</tr>
<tr>
<td>1992</td>
<td>4,119</td>
<td>1,248</td>
</tr>
<tr>
<td>1993</td>
<td>5,703</td>
<td>1,838</td>
</tr>
<tr>
<td>1994</td>
<td>6,648</td>
<td>2,145</td>
</tr>
</tbody>
</table>

Table 1.1: Students enrolled in and graduated from Saudi Technical colleges; GOTEVT, 1994.

This study will investigate the recent student interest in vocational-technical higher education. This study will examine the attitudes of freshmen in Saudi technical colleges toward vocational-technical education, and variables that
might be related to students' attitudes. Sharing the results of this study with administrators of Saudi technical colleges and with vocational-technical education policy makers may assist in the efforts to revise and adapt curriculums and improve instruction to attract more students and support the country's workforce needs.

This study will also provide information that can help the Saudi government in preparing and implementing appropriate plans and programs to help improve students' attitudes toward the field of vocational-technical education. Such plans and programs could ultimately help in solving one of the major problems in Saudi Arabia: a shortage of a high-skill workforce. This study will survey the attitudes of first-year students (freshmen) in the Saudi technical colleges toward vocational-technical education. It aims to provide current information on factors (such as traditions, religion, parents, teachers, and friends) that may influence attitudes toward vocational-technical education.

**Statement of Purpose**

The purpose of this study is to examine the attitudes toward vocational-technical education of freshmen in Saudi technical colleges. A secondary purpose is to investigate variables that might be related to students' attitudes toward vocational-technical education. Variables to be studied are students' traditions and customs, religious beliefs, parents', teachers', and friends' attitudes toward vocational-technical education.
Research Objectives

This study aims to fulfill the following objectives:

1. Identify the demographic characteristics of the Saudi technical colleges' freshmen: age, city size, parents' job type, parents' employer, parents' education, family income, and high school type.

2. Describe the attitudes of first-year students (freshmen) in the Saudi technical colleges toward vocational-technical education.

3. Determine the relationship between selected demographic characteristics (age, city size, parents' job type, parents' employer, parents' education, family socioeconomic status, and high school type), and the freshmen's attitudes toward vocational-technical education. Examine if the freshmen's attitudes toward vocational-technical education differ based on their demographic characteristics.

4. Evaluate the relationship between freshmen's attitudes toward vocational-technical education, and their customs' and traditions' appreciations, religious beliefs and vocational preferences.

5. Investigate the relationship between freshmen attitude toward vocational-technical education and the attitude of the people related to them (parents, peers, and teachers) toward vocational education.
Research Questions

This study seeks the answer to the following questions:

1. What is the attitude of Saudi technical colleges' freshmen toward vocational-technical education?

2. Is there a relationship between freshmen's attitudes toward vocational-technical education and their religious beliefs?

3. Is there a relationship between freshmen's attitudes toward vocational-technical education and their perceptions of their parents' attitudes toward vocational education?

4. Is there a relationship between freshmen's attitudes toward vocational-technical education and their perceptions of their teachers' attitudes toward vocational education?

5. Is there a relationship between freshmen's attitudes toward vocational-technical education and their perceptions of their peers' attitudes toward vocational education?

6. Is there a relationship between freshmen's attitudes toward vocational-technical education and their traditions and customs?

7. Is there a relationship between freshmen's attitudes toward vocational-technical education and their perceptions of vocations?

8. What is the relationship between demographic characteristics and freshmen's attitudes toward vocational education?
9. Is there a difference in freshmen's attitudes toward vocational education based on demographic characteristics?

**Study Procedures:**

The purpose of this study is to examine the attitudes of freshmen in Saudi technical colleges toward vocational-technical education. A secondary purpose is to investigate variables that might be related to students' attitudes toward vocational-technical education.

The target population for this study is technical college freshmen in Saudi Arabia. The frame for this study is the first-year technical college student (freshmen) in Saudi Arabia. Therefore, the study frame is all freshmen in Saudi Technical colleges. To have a representative number of students from each college, the researcher employed proportional stratified random sampling procedures. The total number of students who have been admitted to all technical colleges was 15,592. According to Krejcie and Morgan (1970), a representative sample for a population of N=15,592, within a five percent margin of error, was 375.

This study used descriptive analysis. In addition to the descriptive dimension of this study, there are correlational aspects. The dependant variable for this study is: The attitudes of Saudi freshmen in technical colleges toward vocational-technical education. The independent variables are in the following categories:

1. Freshmen's religious beliefs.
2. Freshmen's traditions and customs.

3. Freshmen's perceptions of vocations.

4. Parental characteristics: parent's occupations (vocational or non-vocational and governmental or non-governmental) and parent's education (elementary, high school, college or university degrees).

5. Freshmen's perceptions of people around them (friends, teachers, and parents) attitudes toward vocational-technical education.

6. Personal information: type of high school attended (general high school or technical high school), birthplace size, socioeconomic status, and age.

The data for this study was collected from a questionnaire adapted partly from a study conducted by Alghofaily (1980). A panel of experts evaluated the instrument validity. Pilot test and test-retest procedures were employed to confirm instrument reliability.

The data for this study was collected the first semester of the 1999-2000 school year. The overall return rate for all respondents was 364 out of 375 (97%). Kerlinger (1979) concluded that there is no need to address non-respondents with more than an 80% response rate. Therefore, the results of this study were generalized to the population of 375 technical colleges freshmen in Saudi Arabia.

Descriptive statistics have been employed to answer the research questions. Frequencies and percentages calculated and compared to depict the characteristics of the study participants. To test relationships, correlation statistics obtained. Correlation coefficient produced to investigate the
relationships between variables. In addition, this study has more than one independent variable; therefore multiple regression procedures have been used. In order to determine the statistical significant of the multiple regression of the study variables, the researcher used F test.

**Delimitations**

This study was conducted in Saudi Arabia's nine technical colleges, giving it comprehensive but a manageable scope. It targeted the Saudi technical colleges' freshmen (first-year students). The data for this study was collected in the first semester of the 1999-2000 school year. The study addressed only the variables identified in its purpose.

**Limitations**

This study findings are limited to the honesty and completeness of the participants’ completion of the questionnaire. The findings of this study can only be generalized to its population. The participants’ completion of the questionnaire depends on their self-perception, understanding, and comprehension of the instructions. The study results depend on the validity and reliability of the instrumentation. In addition, this study has a time limitation. It was conducted in a specific period of time, which limited its results and findings to that period of time only (the first semester of 1999-2000 school year).
Gender may affect the results of this study. Vocational-technical education in Saudi Arabia is generally available to men. Thus, this study was conducted completely with males. Since the instrument was administered in different locations and was distributed by different people, there may be distribution unevenness. There was no control over student attendance during this study; thus subject mortality could limit this study.

Definition of Terms

The following terms are defined to help clarify the study.

**Freshmen's traditions and customs**: tradition defined as the handing down of information, beliefs, and customs by word of mouth or by example from one generation to another without written instruction or cultural continuity in social attitudes, customs, and institutions ([Merriam-Webster](https://www.merriam-webster.com), 1999). Customs are defined as the whole body of usages, practices, or conventions that regulate social life ([Merriam-Webster](https://www.merriam-webster.com), 1999). Freshmen's traditions and customs are constitutively defined as the first-year Saudi students' practices and conventions that regulate their social lives. Freshmen's traditions and customs are operationally defined as the mean score on 21 items, 4 point, Likert-type instrument. Each item, relating to attitudes regarding customs and traditions are rated by respondents from 1 (strongly agree) to 4 (strongly disagree). The responses to all items are analyzed to attain a mean score.
Attitudes of freshmen in technical colleges: Technical (community) College is defined as a 2-year government-supported college that offers an associate degree (Merriam-Webster, 1999). Attitude is defined as a feeling or emotion toward a fact or state (Merriam-Webster, 1999). The attitude of freshmen in technical colleges is defined constitutively as the college’s first-year students’ feelings that cause them to act in certain ways in regard to vocational-technical education.

A freshman’s attitude is operationally defined as the mean score on a 12 item, 5-point, Likert-type instrument. Each item, relating to attitudes as to vocational-technical education, is rated by respondents from 1 (strongly agree) to 5 (strongly disagree). The responses to all items will be analyzed to attain a mean attitude score toward vocational-technical education.

Religious beliefs: Religious is defined as relating to or manifesting faithful devotion to an acknowledged ultimate reality or deity (Merriam-Webster, 1999). Belief is defined as a state or habit of mind in which trust or confidence is placed in some person or thing (Merriam-Webster, 1999).

Religious beliefs are defined constitutively as the state of mind of Saudi freshmen in technical colleges that imply a faithful trust on Islam. Religious beliefs are operationally defined as (1) or (2) choices. Every choice (1 or 2) is summated for all students. The two choices are correlated with each other and a mean score regarding each choice will be obtained.
### Independent Variables

**Public Characteristics**

1. Students' traditions and customs.
2. Students' Religious beliefs.
4. Students' perception of Peer attitude toward vocational-technical education.
5. Students' perception of teachers attitudes toward vocational-technical education.

**Personnel Characteristics:**

1. Age
2. Income
3. Type of high school
4. Birthplace size
5. Parent's occupation & education

### Dependent Variable

The attitude of freshmen in Saudi technical colleges toward vocational-technical education

Figure 1.1 Dependent & independent variables.
CHAPTER 2

REVIEW OF RELATED LITERATURE

Introduction

Students are the main and immediate consumers of vocational-technical education. However, they tend to accept or reject certain educational programs. Acceptance or rejection of any educational program depends on a wide range of reasons, one of which is the student's attitude toward that program.

At the same time, and with people interacting with each other in their daily life, the nature of the people's attitudes is not a steady state. In fact, and out of a conversation between two persons, one of them may change his/her attitude about a certain thing to the extent that the new attitudinal behavior could be the opposite of the previous one.

The significance of attitude theories for human actions, as reported by various authors, are reported in this chapter. A literature review of the major factors that may change people's attitudes toward a specific subject has been conducted as well. In addition, research related to the topic of this study was explored.
Theoretical Framework

Human resources are the main impetus for the economic and social development in any nation. However, the success of developing human resources depends largely on not only the availability of systems that foster their development, but especially the quality and adequacy of these systems (Lemhouver, 1988). One of the main systems having a very important role in human resources development is education. Education is the major vine to a society that enjoys a healthy economy (Lemhouver, 1988).

However, how people in any society perceive education is very important. Do people enroll in education willingly and think that education is very beneficial in their lives or is this not an important question? If the answer is yes, then getting people to enroll depends on their needs and abilities in all aspects of the educational system and making sure that they realize, get and use all benefits of education.

But, if the answer is no, then it implies a look for the reasons behind that situation and try to change it immediately. Educational resistance herein does not mean to resist the whole educational system. Rather it means rejection of any single element of the educational system.

One of the main reasons for educational resistance or acceptance among societies is the attitude toward education or any part of education. Attitudes can be created from many different sources. In this study, some insight discussion,
about factors that may create or change students' attitude toward a particular part of education – vocational-technical education, would be conducted.

Although studies of attitudes toward education appear to be wide ranging and very controversial, it seems that they focus on two major aspects of the human life. Davis (1961) states that attitudinal change theories are derived from either personality-oriented research or group-oriented research. However, Kahle (1984) indicates that attitude change theory would examine persons (personality oriented approach), situations (group oriented approach) and the relationships between situations and persons. Yet, he continues, most theories tend to overemphasize one source of influence at the expense of the other.

In summary, the focus of this research is the attitude of students toward vocational-technical education. Therefore, attitude theories were considered as the base for this study. This study, also, investigates the recent student interest in vocational-technical education, thus attitudinal change theories were discussed. From among the attitudinal change theories, group influence (group oriented theories) on the student decision to enroll in technical colleges was discussed. Group oriented theories consider others influence on a person decision-making process as one of the crucial factors in creating the attitude of that person toward a lot of aspects in his or her life.

Group oriented theories consist of two major types: membership groups and reference groups theories. In here, it is anticipated that there are certain people in our lives that are most influential on our attitude creation and change. With
time, societies form cultural hierarchies that every one should follow. These hierarchies suppose to be the reference to all people in a society. By following the cultural hierarchies, people feel that they are members of that society and refer to it in most of their life matters. In regard to vocational-technical education, the literature indicates, ironically, that the negative attitude toward vocational-technical education is almost a global trend and not limited to a certain society or culture.
Figure 1.2 Research Map of the Study Theoretical Framework.
Attitude Theories

The assessment of student attitudes toward vocational-technical education is a widely used outcome measure. Many research studies have been conducted to collect information from students about how they perceive vocational-technical education. Attitude studies are the most prevalent of all studies in the social and psychological sciences. Allport (1935) claims, the concept of attitude is probably the most distinctive and indispensable concept in contemporary American social psychology. Eagly and Chaiken (1993) state that Allport (1935) assertion that attitude is the subject matter of social psychology is as valid today as it was 50 years ago. One of the major elements that attitude studies investigate is the favorability of a matter or an object. Attitude is defined as "a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object" (Fishbein and Ajzen, 1975). In a similar pattern, Perry (2002) explains that attitude contains a judgment element; he asserts that attitude is simply a response locating an object of thought along some dimension of judgment.

Davis (1961) states that there are two common factors in defining attitudes. First, attitude is an inferred entity, something that is not measured directly but rather deduced from other observable data. Erwin (2001) mentions that attitudes are hypothetical constructs; their existence cannot be seen or directly measured. Second, attitude implies some sort of tendency to act toward a certain object (Erwin, 2001). So, Davis (1961) defines attitude as an inferred factor within the
individual, which involves a tendency to perceive and react in a particular manner toward some aspect of her or his environment. Sherif, Sherif and Nebergall (1981) mention that "having an attitude means that the individual is no longer neutral toward the referents of an attitude. He/she is either for or against, positively inclined or negatively disposed in some degree toward them – not just momentarily, but in a lasting way, as long as the attitude in question is operative."

Hogg and Terry (2000) state that attitude study is critical in understanding the creation of social interaction. Anastasi (1976) states that a person's attitudes would affect his or her daily life. He explains:

"The strength and direction of the individual's interests, attitudes, motives and values represent an important aspect of his personality. These characteristics materially affect his educational and vocational adjustment, his interpersonal pursuits, and other major phases of his daily living."

Although research in attitude theory seems to be wide-ranging, and very controversial, it seems that they focus on two major parts of the human life – psychological and/or social aspects. Those who support the psychological attitude concept argue that attitudes are cognitively driven by human actions (Erwin, 2001). Krech and Crutchfield (1948) cited in Kiesler, Collins and Miller (1983) define an attitude as an enduring organization of motivational, emotional, perceptual, and cognitive processes with respect to some aspect of the individual's life. Kiesler et al (1983) state in explaining the meaning of the word attitude that "Two individuals may make different responses in the same social setting – indicating that a psychological (individual difference) variable "attitude"
is necessary because sociological or environmental variables are not themselves sufficient to explain behavior."

However, social attitude notion supporters claim that some aspects of the physical, social, or external environment rather than the person per se, leads the way in attitudes (Kahle, 1984). They argue that rather than looking for cognitive structure within the individual, attitudes are derived from the individual's social context (Erwin, 2001). In fact, many factors may influence individual beliefs, for example, a person's culture, family background, interests, and aptitudes could all shape the decision to accept or reject any matter in our daily life (Davis, 1961). Hogg and Terry (2000) explained that attitudes are preeminently social, we acquire them through, and they are held in place or modifies by, direct or indirect social interaction.

Recently, however, the combination of the social psychological approach of attitude definition emerged, where the word attitude refers to all classes of evaluative responding, whether overt or covert, cognitive, affective or behavioral (Eagly and Chaiken, 1993). Kahle (1984) states that attitude can be created and changed both as function of the social situation and as a function of purely personal activity. He continues to say; both societal demands and cognitive activity play important roles in attitudes.

**Attitudinal Change**

Since attitudes are learned, they can be changed or unlearned (Lombana, 1992). Kelman (1958) states that knowledge of how an attitude was acquired is
the key to knowing how to change it affectively. Lombana (1992), however, indicates that knowing how the attitude was created is not enough to know how to change it. He mentions that depending on the strength and the nature of the attitude held, the change process could be simple or complex. Taylor and Katarina (1996) determine three processes that may be implicated in attitude changes within a society:

- Cohort (or replacement) effects, where younger generations with different attitudes replace their older counterparts;
- Life-cycle effects, where people change their attitudes as they themselves age or have children or undergo other changes over their life cycle;
- Period affects, where the values of society as a whole change over time.

In the early Nineteenth century, the emphasis of attitude and attitude change research was mainly on the psychological (predominantly cognitive) functioning of human beings (personality – oriented theory). At the end of the same century, the emphasis shifted to individual differences (group–oriented theory). Then, socio-psychological theories, which are a combination of the above mentioned theories, arose and dominated the field of attitude research and it started to be more acceptable to study personal attitude creation and change (Davis, 1961; Hogg & Abrams, 2001, Perry, 2002).

**Personality Oriented Approach**

Personal oriented attitude theories make the individual the main element of attitude creation and change. They claim that attitude change occurs when the
subjective experience of the individual changes. Kahle (1984) states, the thoughts of the individual are of primary importance in any understanding of the directions of attitudes. Whether a person accurately perceives the world or not, the perceptions the individual possesses and the relationships among them influence what attitudes will be manifested.

Even though personality-oriented attitude theories dominated the field of attitude and attitude change research for a period of time, some of its supporters suggested that psychology could not be studied alone. Adorno, Frenkel-Brunswik and Levinson (1950) mention, "Personality evolves under the impact of the social environment and can never be isolated from the social totality within which it occurs." In fact, Adorno et al (1950) indicate that if the role of personality can be made clear, it should be possible to understand better which sociological factors are the most crucial ones and in what ways they achieve their effects.

The authors give an example of ideology as a factor that may have a big role in influencing a person's attitude. They conclude in their study of ideology and sociology that, "...personality [is] an agency through which sociological influences upon ideology are mediated." Although Adorno et al (1950) point out the possibility of applying psychological attitude studies to education, they acknowledge that their findings are rigorously limited to the psychological aspects, and psychological means alone are not sufficient to effect major changes (Davis, 1961).
Group Oriented Approach

On the other hand, group-oriented theorists have shifted the attitudinal studies from the mental functioning of human beings (psychology) toward social psychology (Davis, 1961). Hogg and Terry (2000) state clearly that there has been a recent strengthening of interest among mainstream social psychologist in attitude phenomena. Davis (1961) indicates that in the 1920s the importance of social influence upon the individual was emphasized by many scientists such as Allport, (1924), Betchrew and De Lange, (1924). Hogg and Terry (2000) cited Thomas and Znanieck (1918) and Watson (1930) going so far as to define the whole of social psychology as the scientific study of attitude.

In support of the group-oriented approach, Kahle (1984) asserts that creating the appearance of attitude change and cognitive consistency is an interpersonal tactic determined by social roles and norms. Kahle continues to say, "the idea that a person's life position is related to attitudes is beyond question. Age, sex, income, education, religion, geographic region, etc., have all reliably been shown to correlate with some attitudes.

Hogg and Terry (2000) argue that attitude is a crucial step in creating social interaction. They claim that attitudes are critical to who we are in the sense of where we are located in the complex structure of social groups and categories that comprises the wider social context of human existence.

To illustrate the importance of group-oriented attitude studies, Sherif and Sherif (1956) explain:
"The psychological basis of established social norms such as stereotypes, customs and values is the formation of common reference points or anchorage as a product of interaction among individuals. Once such anchorage are established and internalized by the individuals, they become important factors in determining or modifying his reactions to the situations that he will face later alone....".

However, Kahle (1984) concludes that it should be noted, "relationship or correlation does not mean causation" which undermine the assertion that life position causes attitudes or attitude changes.

**Membership and Reference Groups**

People's attitudes are developed and expressed as behaviors in a context that is social; it contains other people who are actually present or who are invisibly present in the social norms that define social groups to which we do or do not belong (Hogg & Terry, 2000). Asch (1952) states that group influence on individuals might clearly accelerate from a persuasion to a persecution level. At the level of persecution, the pressure of the majority opinion could be so great that the individual may respond with judgment contrary to that perceived to be correct.

Newcomb (1950) divides societies into two groups – membership and reference groups. He states that reference groups normally change dramatically people's attitudes. Attitude change over time may take the imposed, initially non-preferred, membership group as the reference group (Siegel & Siegel, 1957). Newcomb (1950) indicates that after a certain period of time, individuals take
their membership groups as their reference groups and, if they need to, change their attitudes to the other extreme.

This notion of extreme attitudinal change named pluralistic ignorance. Hogg and Terry (2000) define pluralistic ignorance, as an attitude is more closely tied to perceived group norms, even if they are completely inaccurate, than to individual's private attitude. They gave an example of people who oppose excessive alcohol consumption may nevertheless engage in heavy drinking because they falsely believe that most other relevant people are in favor of heavy drinking!

Group-oriented attitude is more present among school students. Davis (1961) indicates that among school and university students, and out of peer pressure, it is common to find that membership groups are reference groups. So, students who enroll in an educational institution may come with certain ideas and beliefs and leave with different ideas and beliefs, which could be contrary to those they had when they entered that institution.

In conclusion, the research provides undeniable evidence that attitudes don't form and persist in a vacuum but are dependent to a large degree upon the attitudes and norms of the groups that construct their frame of reference (Davis, 1961; Hogg & Terry, 2000; Hogg & Abrams, 2001).

**Public (Society) Traditions and Customs**

Levitan and Johnson (1982) identify factors that motivate people to work. They state that those factors accounting for having people enrolled in certain
programs of study to accomplish their career goals. They explain, “Economical, psychological, and sociological aspects of human life are the main factors that motivate people to work. The need to work and reasons for working varies from person to person, but the majority of people work because of the economical aspect of life.”

However, the type of work a person may accept depends largely on his/her societal environment acceptance. Wright (1996) explains that training programs have often had to reflect the employment choices of Saudi citizens rather than the need of the manufacturing and producing sectors. Mahlck (1980) states that, in his study of the factors that may influence students to enter vocational-technical education, social values is the variable that has the highest relationship to choice of studies. Grubb and Lazerson (1982) list many factors that have influenced vocational education in America. They indicate that, in the early 1920s, race, economic background and sex were the major factors that affected school attainment. They conclude that this fact, in turn, challenges schools’ legitimacy in social stratification.

Mellahi (2000) states that vocational education does not operate in a vacuum, but it is best conceptualized as an open system deeply rooted in the culture and strongly influenced by the environmental variables of each country or region. Ali (1993) argues Arab tribal values reinforce the concept of absolute right and wrong and ‘do not rock the boat’ attitudes, and any approach that does not
conform to acceptable norms is considered a threat to established authority and organization stability.

Mellahi and Wood (2001) state that Saudis are highly collectivist within the in-group (tribe and extended family) and highly individualist within the out-group (non-kin and guest workers). In the out-group ties between individuals are loose and interactions are limited. Within the in-group, however, people are integrated into strong, cohesive groups (tribes and extended families). As a result, individuals subordinate their personal interests to the goals of their collective, or in-group. Behavior within the in-group emphasizes cooperation, group welfare, security, and stable social relationships.

Alaki (1972) claims that the negative impact of social values and customs on the production capacity of the labor force is a major cause in preventing Saudi people from practicing certain occupations. Wright (1996) states, as a possible reason of the Saudi cultural situation in regard to manual work, that historical over-supply of employment opportunities for local workers has allowed people to indulge in their aversion to labor-intensive employment, which is reinforced by the stigmas attached to vocational education programs.

Alaki (1972) relates that one of the most serious problems the country faces is that of the customary shift of some workers from their jobs to other jobs that are completely new for them. The reasons for this shift, he continues, are the tribal customs which deem manual work undesirable (Mellahi, 2000). The individual finds himself under pressure from his relatives and friends whether to
quit the job or break his alliances with them. So often he quits the job and works in the government offices or be unemployed (Alaki, 1972).

Bar (1987) finds, in his study of factors that influenced Saudi students to enroll in technical college and the university, social factors, such as family and location, has no effect on students’ decision to enroll in a technical college. Contrary to Bar, Alsadey and Alsehail (1989), who did a similar study, report that they had more than one-half of their sample indicating that location of the technical college was an important factor in choosing it. They emphasize that this factor indicates the strong family ties in the social order of Saudi Arabia. Henderson (1984) says the social aspect of any society is the backbone of that society’s culture. He states, “The social attitude is concerned with maintaining the ethical code of the culture, whether of the established culture or any countercultural deviation from it.”

In conclusion, Mellahi (2000) emphasizes that values and attitudes to vocational work and education in Saudi Arabia are so different from those found in the developed countries. This perception, Mellahi continues, is the product of social cultural values and attributes, some deeply rooted in the Middle Eastern culture and history and some the product of the oil-boom experience. Oil-boom experience categorizes Saudis holding white collar jobs in the public sector whereas skilled and foreign workers hold manual jobs. Wright (1996) summarizes the situation of the Saudi economic situation by saying that it is an economy unlike any other in the world, simultaneously vast in its demands and
wealth, and yet limited by its shortage of human and material resources. In order to enhance the social life in Saudi Arabia, technical-vocational education should respond to and consider the social influences in its future plans and current application (Alkhateeb, 1995).

**Religious Belief**

Religion is one of the important elements that create personal attitude. Although debate regarding the positive versus the negative contributions of religion to social science fields, it is only recently that theory and research have addressed these issues in a systematic and rigorous manner. Researchers in the area of social sciences have contributed, lately, to the development and growth of a new field of religion in social science (Koenig, 1998).

Various fields of psycho-social science are becoming increasingly aware of, and impressed by, the centrality of religious concerns in people’s lives as well as the impact that these concerns have on mental, physical and interpersonal outcomes (Schumaker, 1994; Shafranske, 1996; Hill, 1997; and Paragmet, Paragmet & Mahoney, 2002). Spiritual or religious goals, beliefs, and practices are central to many people’s lives and are powerful influences on cognition, affect, motivation, and behavior (Koenig, 1998). In fact, religion can provide a unifying philosophy and serve as an integrating and stabilizing force in the face of constant environmental and cultural pressures that push for fragmentation, particularly in postmodern cultures (McAdams, 1996).
A quick look to religions shows that almost all religions encourage people to be independent and work to fulfill life's needs. Saudis' religion is no different from the above mentioned role. A quick glance into Islam, which is the only religion in the country, shows that Allah (God) declares that he created the whole universe for the benefit and usage of human beings, so that humans can contemplate and worship him. He mentions in the Quran (the Holy Book of Islam): "And indeed we honored the Children of Adam, and We have carried them on land and sea, and have provided them with good things, and have preferred them above many of those whom We have created with marked preferment". (Chapter 17, verse 70).

In another place, Allah mentions what he created for the humans' consumptions in their daily life: "And it is He who produces gardens trellised and untrellised, and date palms, and corps of different shape and taste (their fruit and seeds) and olives. And pomegranates, similar (in kinds) and different (in taste). Eat of their fruit when it ripen, but pay the due thereof on the day of its harvest, and waste not by extravagance. Verily, He likes not those who waste by extravagance. And of the cattle (are some) for burden (like camels) and (some are) small (unable to carry burden like sheep and goats – for food, meat, milk and wool). Eat of what Allah has provided for you, and follow not the footsteps of Satan. Surely he is to you an open enemy". (Chapter 6, verses 141, 142).

Indeed, Islam encourages learning and doing manual work. Allah (God) mentions that He (the most glorified) worked by his hands. Allah said: "O Iblees (Satan), what prevents you from prostrating yourself to the one whom I created
with both my hands (means Adam)? Are you too proud (to fall prostrate to Adam) or are you one of the high exalted?” (Chapter 39, Verse 75).

In fact, Allah ordered Noah (one of the prophets, peace be upon them all) to craft the ark by himself: “And construct the ship under our eyes... And as he was constructing the ship, whenever the chiefs of his people passed by him, they mocked at him.” (Chapter 12, verses 37 & 38). The Quran tells us that David (peace be upon him) worked by his hands, too. In Chapter 21, verse 80 Allah says: “And we taught him, means David, the making of metal coats of mail (for battles), to protect you in your fighting. Are you then be grateful”. Allah says in another verse: “… And We brought forth iron wherein is mighty power, as well as many benefits for mankind, that Allah may test who it is that will help Him (Allah's religion) and His messengers in the unseen. Verily Allah is all strong, all mighty”. (Chapter 57, verse 25).

At the same time, Prophet Mohammed, peace be upon him, says: Allah likes the believer with a profession” (Alnais, 1991). The prophet, also ordered two persons who came to him pigging for money to go and collect some tree branches and sell it. After a while they bought some clothes and two donkeys for them to ride. The prophet said: the best for a person is to eat from the work of his hands, and prophet David used to eat from the work of his hands”. (Alkhateeb, 1995). Alnais (1991) mentions too, that Prophet Mohammed encourages Moslems to learn. He, peace be upon him, says: Seeking knowledge is a must
on every Moslem". In another narration, Prophet Mohammed, peace be upon him, states: Seek knowledge from the cradle to the grave" (Alnais, 1991).

Alnais (1991) states that religion was the most influential factor on Saudi students' decisions to enroll in technical colleges. He concludes that education planners in Saudi Arabia should utilize Islamic religion as a driving factor in many sectors such as education, industry, and economy. By implementing religion in education, a lot of vocational-technical education may be eliminated or at least reduced (Alnais, 1991).

However, Henderson (1984) states that religious beliefs are frequently distorted by social attitude. People, in any society, normally take their social habits more than their religious beliefs (Henderson, 1984). Reasons for that situation may vary from one society to another. However, there is one common reason – which is societal pressure. Any society builds its social interactions through a long period of time. The moment the social system is established, it is very difficult to be changed (Henderson, 1984).

Parent, Friends and Teachers Attitude

Adolescents develop their notions of ideal and expected work roles through the complex interactions of three primary factors - family background, human capital acquisition, and socialization to class (Steinberg, 1989). A realization of one's social class, resulting from parents' education and occupation/income was found by Steinberg (1989) to be an important determinant of an adolescent's personal occupation and ideological commitments.
In addition, Philips et al. (1991) states, “the public image of the importance of vocational-technical education has diminished considerably... Parents, counselors and educational leaders no longer see vocational education as a viable, socially acceptable alternative for all students....”. In an Iowa vocational education final recommendation report (1992), it has been stated clearly that parental pressures and increased graduation requirements often overemphasize the importance of college preparation programs.

Vocational students have been found to place more importance on things related to family and home (Conroy, 1996). Eschenmann and Olinger (1989) note that distance was extremely important in determining whether to attend a college or not: “Campuses that were perceived ‘too far’ from home were not even considered for matriculation by students regardless of their desire to attend college”. With similar findings to Eschenmann and Olinger, Alsayed and Alsehail (1989) studied the factors that influence Saudi students to enroll in technical college. They find out that two-thirds of their sample indicated that the college location has influenced their decision to enroll in the technical college.

Nagalamu (1986) has been cited in Okojie (1998) stating that vocational education had experienced negative image in Sudan. Nagalamu gave the example of a vocational program that targeted primary school systems. The reason for that program's bad image is the students' parents' misconception of the Integrated Rural Education Centers (IREC). At the beginning, Nagalamu states, parents supported that program because they thought it would prepare
their children for the big cities’ modern industries. However, after they enrolled their children they realized that the program was aimed to prepare students for jobs in the rural areas. So, they either withdraw their children or disrupt their children’s attendance in the IREC programs. By that action, it was clear that the parents’ perceptions of IREC programs have changed to a negative one while it started positive.

Schoolteachers, counselors and administrators play a major role in students’ attitude toward vocational education. Eschenmann and Olinger (1989) say that student motivation is a crucial factor in vocational education. They emphasize the role of faculty members in students’ motivation to enroll in their programs. In contrast, Alnais, (1991) stated that parents, peers, high school teachers and counselors are the least important factors that influence students to enroll in Saudi technical colleges.

Global Attitude toward Vocational-technical Education

Although it is one of the leading countries in technology, the United States has a long and struggling history with vocational-technical education. Grubb and Lazerson (1982) state, “The effort to expand vocational education, in the 1970s, was one response to the failure of vocational programs. The effort to develop training programs outside the schools – such as the Comprehensive Employment and Training Act and Youth Employment and Demonstration Actrecognizes that school-based vocational programs are failing students and that different
institutions have become necessary to prepare the young people for the labor market.

In the United States, the percentage of all high school students, in the past decade, who reported being on the college track, increased more than six times its number (NCES, 1993). In fact, the only group that showed increase interest in vocational education was low achieving or disabled students (NAVE, 1994). Even among those who took vocational education, the number of students who completed a coherent sequence of courses that would lead to labor market advantage declined (NAVE, 1994).

Another problem for vocational education is that it is perceived as a dumping ground for those who are minorities or could not pursue academic education. Ries (1997) states that in 1992, at least 22 out of 40 American states had changed their vocational programs or centers names. The reason for that action varies, but the one most often cited was public image; which is not good.

Some examples for that perception are such programs were perceived as a means of tracking minority students into lower skill careers (Jennings, 1992). It reached the point that some minority students see vocational-technical education as a means for achieving independence and also a place for school dropouts (Chapman, 1992). Chapman (1992) concludes that students perceived vocational-technical education programs as a second alternative to the university.
Another example of the negative attitude toward vocational education is in the United Kingdom. Gibson (1996) says, "The British nation as a whole is still receiving the message that academic study is the true measure of ability, that vocational studies are for the losers." Gibson refers to vocational education as Britain's Achilles heel.

Ward (1996) indicates that the British problem is not limited to students or communities. It reached one of the most valuable customers of vocational education – employers. In a British national survey of employers' views of vocational education, the vast majority of employers stated that vocational education left young people ill equipped to start work (Ward, 1996).

Although, vocational-technical education's bad situation is global, there are some exceptions. Germany is one of the leading countries in vocational-technical education's good image. People consider vocational-technical education, in Germany, one of the good, acceptable educational alternatives (Zonka, 1993). Zonka (1993) states that although the vocational-technical education system in Germany is rooted in the past, it suits Germany's people and fits their future.
CHAPTER 3

METHODOLOGY

Introduction

The purpose of this study is to examine the attitudes of freshmen in Saudi technical colleges toward vocational-technical education. A secondary purpose is to investigate variables that might be related to students’ attitudes toward vocational-technical education.

This chapter is organized into the following sections: population and sample, research design, instrumentation, validity and reliability, data collection, and data analysis.

Population and Sample

The target population for this study is technical college freshmen in Saudi Arabia. Therefore, the frame for this study is the first-year technical college student (freshmen) in Saudi Arabia. The GOTEVT that oversees all technical colleges in Saudi Arabia has been contacted to secure the names of all students who were admitted to the technical colleges in the 1999-2000 school year.

For this study, the accessible population is technical college freshmen who enrolled in all Saudi technical colleges in the 1999-2000 school year. There are
15,592 Saudi freshmen in technical colleges in the school year 1999-2000. Technical college freshmen are the pupils who graduated from both academic and technical education (high schools) and decided to enroll in vocational-technical education (technical colleges). The researcher believes that college freshmen who have recently made the decision to attend a technical college can identify the variables that might have influenced their decisions. The perceptions of students who have attended a technical college for a number of years might not recall the reasons they selected such an institution or their perceptions might have been impacted by their educational experience.

The study frame was all freshmen in Saudi technical colleges. The frame was verified with the lists of freshmen’s names and their identification numbers in every college. This procedure is to avoid frame error. Then, the sample was drawn from the frame.

Sample size was established by using a table developed by Krejcie and Morgan (1970). To have a representative number of students from each college, the researcher employed proportional stratified random sampling procedures. According to Krejcie and Morgan (1970), a representative sample for a population of N=15,592, within a five percent margin of error, was 375. To assure choosing a sample that represents the population, this study included all Saudi technical colleges. Depending on the number of freshmen enrolled in each college, the researcher selected a proportional sample from each technical
college. The following table (table 3.1) displays the proportions represented from each college in the total sample.

<table>
<thead>
<tr>
<th>College Name</th>
<th>Number of Freshmen</th>
<th>Sample Size</th>
<th>Percentage of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dammam</td>
<td>1519</td>
<td>37</td>
<td>10%</td>
</tr>
<tr>
<td>Buraidah</td>
<td>1298</td>
<td>33</td>
<td>9%</td>
</tr>
<tr>
<td>Abha</td>
<td>1584</td>
<td>39</td>
<td>10.5%</td>
</tr>
<tr>
<td>Hail</td>
<td>1136</td>
<td>27</td>
<td>7%</td>
</tr>
<tr>
<td>Hasa</td>
<td>1781</td>
<td>45</td>
<td>12%</td>
</tr>
<tr>
<td>Jeddah</td>
<td>2433</td>
<td>57</td>
<td>15.5%</td>
</tr>
<tr>
<td>Madinah</td>
<td>1285</td>
<td>29</td>
<td>7.5%</td>
</tr>
<tr>
<td>Makkah</td>
<td>360</td>
<td>8</td>
<td>2%</td>
</tr>
<tr>
<td>Riyadh</td>
<td>2946</td>
<td>75</td>
<td>20%</td>
</tr>
<tr>
<td>Jeddah Electronics</td>
<td>1145</td>
<td>25</td>
<td>6.5%</td>
</tr>
<tr>
<td>Total</td>
<td>15592</td>
<td>375</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 3.1: Sample proportions of the population (n=375).

Research Design

Attitude studies are classified as descriptive survey research (Marten, 1998; Van Delan, 1966). Kerlinger (1973) states that survey research is probably best used for obtaining personal and social facts, beliefs, and attitudes. Descriptive
survey research is best utilized to explain attitudes on the basis of the data collected at a point in time (Ary, Jacobs, & Razavieh, 1985). They continue to say that descriptive survey research methods are used to obtain information in relation to existing conditions which are essential in the decision making process.

In addition to the descriptive dimension of this study, there are correlational aspects. Correlation studies deal with any possible relationships between variables, which could be an important element in the educational research studies. The importance of such relationships is visible in the exploratory studies where a variable or more could explain other variable(s), which may influence the decision making process in regard to specific matters. Correlational studies are not limited to relationships; they are beneficial in making predictions. If there is a correlation between two variables or more, then we can predict from one variable to another. (Thorndike, 1978; Ary et al, 1985 & Mertens, 1998).

Data was collected to meet the research objectives and answer in questions presented in Chapter One. The dependant variable for this study is: Saudi freshmen in technical colleges attitudes toward vocational-technical education. The independent variables are in the following categories:

1. Freshmen’s religious beliefs.
2. Freshmen’s traditions and customs.
3. Freshmen’s perceptions of vocations.
4. Parental characteristics: parent’s occupations (vocational or non-vocational and governmental or non-governmental) and parent’s education (elementary, high school, college or university degrees).

5. Freshmen’s perceptions of people’ attitudes toward vocational-technical education: student’s perceptions of friends’ attitudes, student perceptions of teachers’ attitude, and student’s perceptions of parents’ attitudes toward vocational education.

6. Personal information: type of high school attended (general high school or technical high school), birthplace size, socioeconomic status, and age.

Instrumentation

Borg et al (1996) stated that, in survey studies, questionnaires have two advantages over interviews for collecting research data: The cost of sampling respondents over a wide geographic area is lower, and the time required to collect data typically is much less. A panel of experts will evaluate the validity of the instrument. Pilot test and test-retest procedures will be used to affirm instrument reliability.

The data for this study have been collected using a questionnaire adapted from a study conducted by Alghofaily (1980). Alghofaily’s study has similar objectives and has been conducted on a similar population (Saudi youth attitudes towards work and vocational education). However, since this study deals with college level students and Alghofaily’s study targeted the high school level, only part of Alghofaily’s instrument has been used in this study. In fact, and given that
religion and customs are the same for the Saudi society, both religion and customs parts of Alghofaili’s survey have been adapted completely from his study.

In relation to the study research questions, this study’s questionnaire (Appendix A) consists of three parts (Table, 3.2). Part one assesses student religious beliefs and social customs and traditions and consists of two sections, A and B. Items used in section A determine student religious beliefs. Section A incorporates a response format with two choices and the participants select the one which is more applicable to their lives. Items used in section B deal with the student customs and traditions. Section B reflects a Likert-style questionnaire that has a four-point scale from strongly disagree (SD) to strongly agree (SA).

Part two focuses on the students and the people around them perceptions of vocations and vocational-technical education. Part two consists of two sections A and B. Items in section A of part two are about student perceptions of vocations. Section A incorporates a response format with two choices and the participants select the one which is more applicable to their lives. Section B contains Likert-type questions that focus on how students, their parents, teachers and friends perceive vocational-technical education.

Part three is related to students’ demographic characteristics. It contains a mixture of different types of questions and provides general information about the individuals who will be completing the questionnaire. Ages, geographical location

61
size, and socioeconomic are some factors included in this section (Appendix A).

Table 3.3 cross-reference the study questions to different parts of its instrument.
<table>
<thead>
<tr>
<th>Research Question</th>
<th>Survey items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is the attitude of Saudi technical college freshmen toward vocational education?</td>
<td>Part II, section B (1)</td>
</tr>
<tr>
<td>2. Is there a relationship between freshmen’s attitudes’ toward vocational education and their religious beliefs?</td>
<td>Part I, section A</td>
</tr>
<tr>
<td>3. Is there a relationship between freshmen’s attitudes toward vocational education and their perceptions of their parents’ attitudes toward vocational education?</td>
<td>Part II, section B (2.2)</td>
</tr>
<tr>
<td>4. Is there a relationship between freshmen’s attitudes toward vocational education and their perceptions of their teachers’ attitudes toward vocational education?</td>
<td>Part II, section B (2.1)</td>
</tr>
<tr>
<td>5. Is there a relationship between freshmen’s attitudes toward vocational education and their perceptions of their peers’ attitudes toward vocational education?</td>
<td>Part II, section B (2.3)</td>
</tr>
<tr>
<td>6. Is there a relationship between freshmen’s attitudes toward vocational education and their traditions and customs?</td>
<td>Part I, section B</td>
</tr>
<tr>
<td>7. Is there a relationship between freshmen’s attitudes toward vocational education and their perceptions of vocations?</td>
<td>Part II, section A</td>
</tr>
<tr>
<td>8. What is the relationship between demographic characteristics and freshmen’s attitudes toward vocational education?</td>
<td>Part III</td>
</tr>
<tr>
<td>9. Is there a difference in freshmen’s attitudes toward vocational education based on demographic characteristics?</td>
<td>Part III</td>
</tr>
</tbody>
</table>

Table 3.2: Research questions cross-referenced to survey items.
Validity and Reliability

Validity:

A panel of experts evaluated the validity of this study’s instrument. The panel of experts consisted of members in the following areas: expert(s) in vocational-technical education, expert(s) in data collection and analysis and Saudi expert(s) (Appendix B). The Saudi expert(s) included in the panel of experts evaluated the content validity in relation to the Saudi culture. The panel of experts evaluated and determined the instrument’s face and content validity.

The instrument was field tested with 15 technical college freshmen admitted to Riyadh Technical College in the 1999-2000 school year. The field test focused on the clarity of the questions, the instructions, the format, and length of the questionnaire. Due to the fact that, the questionnaire was administered in the Arabic language, it was field tested in Arabic. The questionnaire was submitted to the same panel of experts for a final evaluation and determination of its validity. The researcher reviewed the comments, recommendations and concerns identified by the panel and the instrument modified the instrument as needed.

Additionally, and for the two parts that have been adapted from Alghofaily’s study entirely (religion and customs), Alghofaily conducted a field test with a selected sample of 24 Saudi youth from academic and vocational students in the four major parts of Saudi Arabia (middle, south, east, and west). Each respondent completed the questionnaire, noting the questions that were unclear, misleading or sensitive to the Saudi culture. Alghofaily indicated that some of the
items had been clarified or modified according to the recommendations of some of the respondents. Alghofaily continues that responses were also discussed with respondents regarding the meaning and significance of the items to the goals of the study. Alghofaily concluded that the comments of the participants indicated that the items were well understood and meaningful to the concepts of vocational education.

Reliability:

The pilot test was conducted before the questionnaire was distributed to respondents to establish the reliability of the instrument. To assure internal consistency, test-retest procedures were used. A pilot test of the instrument’s reliability was conducted by a representative sample of technical college freshmen (n=16) selected purposely from the target population. The pilot test sample was excluded from the study sample. The survey instrument used in this study was tested for reliability under five categories: (a) the first scale of Part I questions, the perceived religious beliefs; (b) the second scale of Part I questions, the perceived customs and traditions; (c) the first scale of Part II questions, the perceived vocations; (d) the second scale of Part II questions, the perceived freshmen’s attitudes; and (e) the third scale of Part II questions, the perceived people’s attitudes. The results of the test/retest for the pilot test are reported in Table 3.3.
<table>
<thead>
<tr>
<th>Categories of the instrument</th>
<th># of variables</th>
<th>test/retest correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion</td>
<td>7</td>
<td>.681**</td>
</tr>
<tr>
<td>Customs and traditions</td>
<td>21</td>
<td>.694**</td>
</tr>
<tr>
<td>Vocations</td>
<td>9</td>
<td>.888**</td>
</tr>
<tr>
<td>Attitude</td>
<td>12</td>
<td>.743**</td>
</tr>
<tr>
<td>People's attitude</td>
<td>3</td>
<td>.732**</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**

Table 3.3: Instrument reliability test (test/retest).

Nully (1982) noted that a correlation greater than 0.65 can be considered to be an acceptable level for research purposes. For this study the test/retest results considered to be reliable for the entire instrument and its scales developed to collect data of freshmen attitude, perceived religion, customs and vocations, and people's attitude.

**Data collection**

The data for this study was collected during the first semester of the 1999-2000 school year. The questionnaires for this study were coded for organization and follow up purposes. Each college was asked to nominate teachers who would administer the research instrument (Appendix C). Only one college
responded to this request, therefore the researcher decided to go to each college
to conduct the first questionnaire distribution and get teachers names for follow-
up purposes. Before conducting the study, a list of freshmen randomly selected
and sent to each college.

A cover letter was prepared and signed by the chairman of the board of
technical colleges. The letter was mailed to the technical colleges’ deans. In
addition to the request for nomination of teachers who would distribute the study
questionnaires to the students, the letter introduced and explained the purpose of
the study (Appendix C). Instructions on where to return the questionnaire were
specified in this letter as well.

Another letter signed by the study advisor and the researcher was attached to
each questionnaire, thanking the research participants (Appendix D).
Respondents were given instructions on how to complete the questionnaire and
directions on what they should do in case they had any questions. In this letter,
participants were assured of their confidentiality and the letter explained the
importance of their participation in this study. While the researcher was at the
colleges, he distributed the questionnaire to the sample and got 195 (52%)
completed surveys back from participants. Colleges (teachers) were asked to
return the remaining questionnaires within two weeks. Another 84 students
(22.4%) sent their surveys to the researcher.

Two weeks after the initial survey distribution, the researcher sent a second
letter to the deans of all colleges (Appendix E). In this letter, the researcher
thanked those participants that have completed the questionnaire and urge those who did not to return the completed surveys as soon as possible. Fifty seven freshmen (15.2%) responded after the mailing of the reminder letter.

Two weeks later, a new letter and replacement surveys were sent to the colleges (Appendix F). Determined by the coding system of the questionnaires, a list of students who did not submit their responses and their colleges attached to that letter. The letter mentioned that the listed participants did not respond and emphasize the importance of their participation in the study. Twenty-eight participants (7.4%) responded to the secondary mailing.

In this study, the overall return rate for all respondents was 364 out of 375 (97%). Kerlinger (1979) concluded that with more than an 80% response rate, it is not necessary to address the non-respondents again. At the same time, the number of non-respondents was very small [11 participants (3%) of the sample size]. Therefore, the results of this study were generalized to the population of 375 technical colleges freshmen in Saudi Arabia.

**Data Analysis**

Descriptive statistics were used to answer the research questions. Frequencies and percentages calculated and compared to depict the characteristics of the study participants. The participants' frequency distributions, percentages, ranges, means and standard deviations calculated to answer the research questions.
To test relationships, correlation statistics were used. Correlation coefficients were used to investigate the relationships between variables. A correlation coefficient of .70 or higher indicates that there are strong relationships between the variables correlated (Davis, 1971.)

This study has more than one independent variable; therefore multiple regression procedures have been used. Multiple regressions will benefit this study by identifying the amount of variance that some independent variables explain toward the dependent variable. In order to determine the statistical significant of the multiple regression of the study variables, the researcher will use F test. F test will explain statistically the significance that the independent variables may contribute to the explanation of the dependant variable.
CHAPTER 4

RESEARCH FINDINGS AND DISCUSSION

Introduction

The purpose of this study was to examine the attitudes toward vocational-technical education of freshmen in Saudi technical colleges. A secondary purpose was to investigate variables that might be related to students' attitudes toward vocational-technical education. Variables studied are students' religious beliefs, traditions' and customs' appreciations, parents', teachers' and friends' attitudes toward vocational-technical education and selected freshmen's demographic characteristics. The data was collected through the use of a mailed questionnaire to each of the 375 freshmen (the study sample) in the nine Saudi technical colleges. A total of 364 out of 375 (97%) of the Saudi technical colleges' freshmen responded.

This chapter presents the findings of the research study and is organized into five sections representing data analysis for the following objectives:
1. Identify the demographic characteristics of the Saudi technical colleges' freshmen: age, city size, parents' job type, parents' employer, parents' education, family income, and high school type.

2. Describe the attitudes of first-year students (freshmen) in the Saudi technical colleges toward vocational-technical education.

3. Determine the relationship between selected demographic characteristics (age, city size, parents' job type, parents' employer, parents' education, family income, and high school type), the freshmen's attitudes toward vocational-technical education and if the freshmen's attitudes toward vocational-technical education differ based on their demographic characteristics.

4. Evaluate the relationship between freshmen's attitudes toward vocational-technical education and their customs' and traditions' appreciations, religious beliefs, vocational preferences.

5. Investigate the relationship between freshmen's attitudes toward vocational-technical education and the attitudes of the people related to them (parents, peers, and teachers) toward vocational education.
Research Questions

Based on the objectives stated, this study seeks to answer the following questions:

1. What is the attitude of freshmen in Saudi technical colleges toward vocational-technical education?

2. Is there a relationship between freshmen’s attitudes toward vocational-technical education and their religious beliefs?

3. Is there a relationship between freshmen’s attitudes toward vocational-technical education and their perceptions of their parents’ attitudes toward vocational education?

4. Is there a relationship between freshmen’s attitudes toward vocational-technical education and their perceptions of their teachers’ attitudes toward vocational education?

5. Is there a relationship between freshmen’s attitudes toward vocational-technical education and their perceptions of their peers’ attitudes toward vocational education?

6. Is there a relationship between freshmen’s attitudes toward vocational-technical education and their traditions and customs?

7. Is there a relationship between freshmen’s attitudes toward vocational-technical education and their perceptions of vocations?

8. What is the relationship between demographic characteristics and freshmen’s attitudes toward vocational education?
9. Is there a difference in freshmen's attitudes toward vocational education based on demographic characteristics?

**Survey Response**

This study utilized survey research to investigate the attitudes of freshmen in Saudi technical colleges toward vocational-technical education and other variables that might interact with that variable. The survey was distributed to 375 technical college freshmen all over the Kingdom of Saudi Arabia. There are 10 Saudi technical colleges in nine cities (Riyadh, Jeddah, Dammam, Buraidah, Ahsa, Abha, Madinah, Hail, and Makkah). Stratified random samples of freshmen from each technical college have completed the survey at their technical colleges during the 1999-2000 academic year. The researcher traveled to all technical colleges and conducted the study. A total of 364 out of 375 (97%) of the freshmen responded.

**Discussion of Findings**

The respondents were asked to rate the five aspects, religious beliefs, traditions and customs, vocational preferences, student attitudes toward vocational-technical education and other people's attitude toward vocational-technical education. On a two-statement scale, the respondents chose one of the statements that reflect their attitudes, measuring both religious beliefs and vocational preference. A four-point Likert scale measured customs and traditions. The categories of measurement were (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree.
A five-point Likert scale measured student attitude toward vocational-technical education. The categories of measurement were (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree, (5) not applicable. The attitudes of the people related to the freshmen (parents, peers, and teachers) toward vocational-technical education were measured by a four-point Likert-scale. The categories of measurement were (1) strongly support it; (2) support it; (3) do not support it; (4) strongly do not support it.

Research Objective 1

The objective, “Identify the demographic characteristics of the Saudi technical colleges’ freshmen: age, city size, parents’ job type, parents’ employer, parents’ education, family income, and high school type,” aims to identify the selected demographic characteristics of the Saudi technical colleges’ freshmen in nine cities (Riyadh, Jeddah, Dammam, Buraidah, Ahsa, Abha, Madinah, Hail, and Makkah). The third part of the study instrument investigated the demographic characteristics of the Saudi technical colleges freshmen. The information collected from the students includes the followings: age, city size, parents’ occupations, parents’ education, family income, and student high school type. The respondents reported the following demographic characteristics:
Age:

The age range of the students was from 18 to 28 years old. The average age for the Saudi technical colleges' freshmen was 20.6 years (Table 4.1). Of the 364 respondents, 358 responded to this part of the demographic characteristics.

<table>
<thead>
<tr>
<th>Student Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>N=364</td>
</tr>
<tr>
<td>Valid N</td>
</tr>
<tr>
<td>Missing</td>
</tr>
</tbody>
</table>

Table 4.1: Descriptive statistics of age.

Out of the 358, 140 (38.5%) are at the age of 20 years old, 66 (18%) are 19 years old, and 63 (17.3%) are 21 years old (Table 4.2). Therefore, and due to the mean age of the study sample participants (20 years), it is noticeable that the majority of the freshmen in Saudi technical colleges did not enroll in the colleges immediately after they graduated from high school. The average age of high
school graduates who are accepted in the university is 19 years (King Saud University, 1998). Instead, it took them a year to decide to enroll in technical colleges.

<table>
<thead>
<tr>
<th>Student Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>18.00</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>19.00</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>20.00</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>21.00</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>22.00</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>23.00</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>24.00</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>25.00</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>26.00</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>28.00</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>358</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2: Frequency distribution of age.
City Size:

A scale of 1-3 measured the freshmen's city size. One means freshmen who live in urban areas, two those who live in suburban cities, and three refers to freshmen who live in rural areas or villages. The majority of the freshmen (299 students) live in either urban or suburban areas (82.1%). One hundred fifty (41.2%) respondents indicated that they live in urban areas, while 149 (40.9%) stated they live in suburban areas. Only 65 students (17.9%) of the study sample reported living in small (rural) cities (Table 4.3). Most of the urban and suburban cities have many educational options, one of which is technical college, or in a broader sense vocational-technical education. As a result, the majority of the students in this study may not need to move to other locations to get education.

<table>
<thead>
<tr>
<th>City Size</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>150</td>
<td>41.2</td>
</tr>
<tr>
<td>Suburban</td>
<td>149</td>
<td>40.9</td>
</tr>
<tr>
<td>Rural</td>
<td>65</td>
<td>17.9</td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.3: Frequency distribution of city size.
Parents' Characteristics:

The parents' occupation and education have been included and analyzed. The aspects related to parents, which have been analyzed, are: (a) parents' occupations; (b) parents' employer; and (c) parents' education. However, these items have been analyzed in the survey as "fathers" and "mothers" rather than parents.

Fathers' occupation:

In the issue of fathers' type of occupation, there were three categories: (a) vocational jobs, (b) non-vocational jobs, and (c) no jobs. Fathers' employers were divided into three categories: (a) non-government employer, (b) government employer, and (c) no jobs. The majority of freshmen's fathers (169) work in non-vocational jobs (46.4%). However, 112 freshmen (30.8%) in the study pointed out that their fathers have no jobs. Eighty-three participants, only (22.8%) of the sample, indicated that their fathers work in vocational jobs (Table 4.4). Only small portion of the freshmen's fathers work in the vocational field (23%). Consequently, it could be concluded that father's job type is not related to the freshmen's decision to enroll in vocational-technical education.
father Job Type

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>83</td>
</tr>
<tr>
<td>Non-vocational</td>
<td>169</td>
</tr>
<tr>
<td>No job</td>
<td>112</td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
</tr>
</tbody>
</table>

Table 4.4: Frequencies of fathers' job type.

On the other hand, 186 freshmen from the sample indicated that their fathers work in a government agency (51.1%). One hundred twelve freshmen stated that their fathers have no jobs (30.8%), while 66 freshmen's fathers (18.1%) were working in the private sector (non-government) (Table 4.5). Overall, more than one-half of the sample's fathers (51.1%) are working in government jobs. Therefore, and due to the fact that government jobs are preferred to non-government jobs, fathers' employer could be related to the students decision to enroll in vocational-technical education.
### Father Employer

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>186</td>
<td>51.1</td>
</tr>
<tr>
<td>Non-government</td>
<td>66</td>
<td>18.1</td>
</tr>
<tr>
<td>No job</td>
<td>112</td>
<td>30.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>364</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.5: Frequencies of freshmen's fathers' employer.

**Mothers' occupation:**

The ranges of mothers' job type were divided into the following categories: (a) vocational job, (b) non-vocational job, and (c) no jobs. Mothers' employers were divided into three categories: (a) non-government employer, (b) government employer, and (c) no jobs. The majority of the mothers in this study 339 (93.1%) had no jobs. The remaining mothers who work (25) were working in non-vocational jobs (6.9%). In fact, no mothers had vocational jobs (Table 4.6).
<table>
<thead>
<tr>
<th>Non-vocational</th>
<th>25</th>
<th>6.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>No job</td>
<td>339</td>
<td>93.1</td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.6: Frequencies of mothers' job type.

As it has been pointed out, the results of mothers' job type analysis could be applied to mothers' employer. The reason for that is that the majority of the mothers are out of a job. Since they have no jobs, the mothers have no employers either. Three hundred thirty-nine mothers are unemployed (93.1%). Twenty-three mothers (6.3%) were working in government agencies and only two mothers (0.5%) worked in the non-governmental sector (Table 4.7).
### Mother Employer

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>23</td>
<td>6.3</td>
</tr>
<tr>
<td>Non-government</td>
<td>2</td>
<td>.5</td>
</tr>
<tr>
<td>No job</td>
<td>339</td>
<td>93.1</td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.7: Frequencies of mothers' employer.

The situation of the mothers' occupation status, which indicates that the majority of them have no jobs, might suggest some relationship between the mother job and the students' decision to enroll in technical colleges. Because for the one who has no job, he/she would like to see their siblings succeed in education regardless of its type, hoping that education will lead to a decent future job.
Fathers’ education:

Seventy-four students reported that their fathers’ are illiterate (20.3%). The majority of the fathers were in the elementary level 119 (32.7%). Intermediate level of fathers’ education was reported by 75 freshmen (20.6%). Forty-eight respondents reported their fathers’ level of education to be at the high school level (13.2%). Forty-three (11.8%) students indicated that their fathers have a bachelor’s degree level. Only five fathers (1.4%) were at the post-bachelor’s degree level of education (Table 4.8).

<table>
<thead>
<tr>
<th>Father Education</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>74</td>
<td>20.3</td>
</tr>
<tr>
<td>Elementary</td>
<td>119</td>
<td>32.7</td>
</tr>
<tr>
<td>Less than high school</td>
<td>75</td>
<td>20.6</td>
</tr>
<tr>
<td>High school</td>
<td>48</td>
<td>13.2</td>
</tr>
<tr>
<td>B.A.</td>
<td>43</td>
<td>11.8</td>
</tr>
<tr>
<td>Graduate school</td>
<td>5</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.8: Freshmen’s fathers’ level of education.
Mothers' education:

The majority of the respondents' mothers, 177 (48.6%), were illiterate. One hundred one mothers (27.7%) were at the elementary level. Thirty-six (9.9%) mothers had an intermediate diploma, thirty-three (9.1%) had a high school diploma, and 17 (4.7%) mothers had a bachelor's degree. No mother had a graduate degree (Table 4.9).

<table>
<thead>
<tr>
<th>Mother Education</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>177</td>
<td>48.6</td>
</tr>
<tr>
<td>Elementary</td>
<td>101</td>
<td>27.7</td>
</tr>
<tr>
<td>Less than high school</td>
<td>36</td>
<td>9.9</td>
</tr>
<tr>
<td>High school</td>
<td>33</td>
<td>9.1</td>
</tr>
<tr>
<td>B.A.</td>
<td>17</td>
<td>4.7</td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.9: Mothers' level of education.

Overall, freshmen's fathers' educational level tends to be in the lower level (illiteracy or elementary level) more than in the higher level of the scale (high
school or bachelor’s degree). This fact shows that more than one-half of the respondents (53%) reported that their fathers are in the lower level of the educational scale (either illiterate or elementary levels). This result points out that fathers may encourage their sons to enroll in the technical colleges hoping that it will lead them to better future.

On the other hand, mothers’ educational situation is worse than fathers’ situation. More than (75%) of the mothers are either illiterate or at the elementary educational level. Therefore, to secure a better life to their kids, freshmen’s mothers might influenced their decision to enroll in technical colleges.

<table>
<thead>
<tr>
<th>Level of education</th>
<th>% of mothers</th>
<th>% of fathers</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>48.6</td>
<td>20.3</td>
</tr>
<tr>
<td>Elementary</td>
<td>27.7</td>
<td>32.7</td>
</tr>
<tr>
<td>Less than high school</td>
<td>9.9</td>
<td>20.6</td>
</tr>
<tr>
<td>High school</td>
<td>9.1</td>
<td>13.2</td>
</tr>
<tr>
<td>B.A.</td>
<td>4.7</td>
<td>11.8</td>
</tr>
<tr>
<td>Graduate school</td>
<td>0</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.10: Parents’ level of education.
Income:

The income scale was divided into five categories. The first category was less than $10,000 yearly income; the second category was between $10,000 and less than $15,000; the third category was from $15,000 to less than $20,000; the fourth category was between $20,000 and less than $25,000; and the fifth and last category was $25,000 and more.

The biggest group 23.1% (84) of freshmen reported the least annual family income (less than $10,000). The next largest group of freshmen (72) 19.8% earned between $15,000-19,999. Seventy-one freshmen (19.5%) were at the top of the scale ($25,000 or more per year). Sixty-three freshmen (17.3%) were in the second category ($10,000-14,999). The smallest group of freshmen 14.3% (52) was in the ($20,000-24,999) range of annual income. However, 22 participants (6%) did not report their families’ annual income (Table 4.11)
<table>
<thead>
<tr>
<th>Income</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid &lt;$10,000</td>
<td>84</td>
<td>23.1</td>
</tr>
<tr>
<td>$10,000-$15,000</td>
<td>63</td>
<td>17.3</td>
</tr>
<tr>
<td>$15,000-$20,000</td>
<td>72</td>
<td>19.8</td>
</tr>
<tr>
<td>$20,000-$25,000</td>
<td>52</td>
<td>14.3</td>
</tr>
<tr>
<td>$25,000 and more</td>
<td>71</td>
<td>19.5</td>
</tr>
<tr>
<td>Total</td>
<td>342</td>
<td>94.0</td>
</tr>
<tr>
<td>Missing</td>
<td>22</td>
<td>6.0</td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.11: Freshmen's family annual income.

This result reveals that, the largest group (23.1%) reported their income in the lower level of the scale. However, by conducting a Chi Square test, there were no differences in the percentages of students' family income level (Expected N=68.4, Sig.= .084). Accordingly, socioeconomic situation might not be a factor that convinced students to enroll in technical colleges.
High school type:

Most of the freshmen who entered the study were academic high school graduates 328 (90.1%). Only 36 freshmen 9.9% of the sample were vocational-technical high school graduates (Table 4.12). Therefore, it can be stated that high school type may not be the driving factor for students to enroll in the Saudi technical colleges. Contrary to those who graduate from technical high schools, whose only choice is to enroll in technical colleges, and, by graduating from academic high schools, the majority of the students in this study have had the option of university enrollment. One of the reasons that might contribute to the freshmen choice of technical colleges could be that their fathers advise them. Another reason is that they tried other alternatives after they graduated from high schools, but they were not so lucky. So, they applied for admission in technical colleges and have been admitted.
High School Type

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>328</td>
<td>90.1</td>
</tr>
<tr>
<td>Vocational</td>
<td>36</td>
<td>9.9</td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.12: Freshmen's high school type.

Research Objective 2

The responses to the second objective in this study, "Describe the attitudes of first-year students (freshmen) in the Saudi technical colleges toward vocational-technical education," were analyzed using descriptive statistics (means and standard deviations). Section two of part II of the questionnaire was devoted to this objective by asking the respondents why they chose technical colleges, and listing 12 items that may answer this question. A five-point Likert scale measured each item. The categories for each item were (5) strongly agree, (4) agree, (3) disagree, (2) strongly disagree, (1) not applicable.
The researcher used the scale in Table 4.13 to evaluate the mean scores of all responses related to this objective. This objective will seek the answer to the following research question:

1. What is the attitude of Saudi technical colleges' freshmen toward vocational education?

<table>
<thead>
<tr>
<th>Mean range</th>
<th>Agreement level</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.26-4.00</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>2.51-3.25</td>
<td>Agree</td>
</tr>
<tr>
<td>1.76-2.50</td>
<td>Disagree</td>
</tr>
<tr>
<td>1.00-1.75</td>
<td>Strongly disagree</td>
</tr>
</tbody>
</table>

Table 4.13: Description of Likert-type question mean value on the scale of students' attitudes toward vocational-technical education.

Table 4.14 lists each item and its mean and standard deviation for the responses on the attitudes of freshmen toward vocational education. As illustrated in Table 4.14, item 1, “fathers’ preference” is considered to be the most
important item with the highest mean score of 3.03 (Agree level). Item 12, “country’s future and item 11, “vocational education importance” were at the not applicable level, therefore both items have been eliminated from the study. Item 7, “Like hands-on jobs,” with the mean of 1.45, item 8, “The only choice” with the mean of 1.31, item 9, “Government support,” with the mean of 1.25 and item 10, “High paying jobs,” with the mean of 1.20 were, also, rated in the strongly disagree level. The remaining items (item 3 “relatives support,” with the mean of 1.98, item 2, “teachers’ advice,” with the mean of 2.31, item 6, “higher job ranking,” with the mean of 1.66, item 4, “easy education,” with the mean of 1.70, and item 5, “shorter period of education,” with the mean of 1.70) were categorized in the disagreement level.

Overall, all items in this part of the survey, except item number 1, “fathers’ preference,” which was classified in the agreement level (3.26-4.00), were classified in the disagreement, strong disagreement, or not applicable level. No single item was classified in the strong agreement level category.

This fact indicates that the possible reason that might participate in forming a positive students’ attitude toward vocational-technical education is their fathers’ preference of vocational-technical education. On the other hand, students stated that the role of vocational-technical education in their life, higher level of payment, hands-on job preference, and government support did not participate in creating their decision to enroll in vocational-technical education.
**Reasons for Attending Technical Colleges**

<table>
<thead>
<tr>
<th>Reason</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathers' preference</td>
<td>364</td>
<td>3.03</td>
<td>1.29</td>
</tr>
<tr>
<td>Teachers' Advice</td>
<td>364</td>
<td>2.31</td>
<td>1.58</td>
</tr>
<tr>
<td>Relatives' support</td>
<td>364</td>
<td>1.98</td>
<td>1.55</td>
</tr>
<tr>
<td>Easy education</td>
<td>364</td>
<td>1.70</td>
<td>1.27</td>
</tr>
<tr>
<td>Shorter period of time</td>
<td>364</td>
<td>1.70</td>
<td>1.40</td>
</tr>
<tr>
<td>High job ranking</td>
<td>364</td>
<td>1.66</td>
<td>1.48</td>
</tr>
<tr>
<td>Like hands-on jobs</td>
<td>364</td>
<td>1.45</td>
<td>1.33</td>
</tr>
<tr>
<td>The only choice</td>
<td>364</td>
<td>1.31</td>
<td>1.22</td>
</tr>
<tr>
<td>Government support</td>
<td>364</td>
<td>1.25</td>
<td>1.39</td>
</tr>
<tr>
<td>High paying jobs</td>
<td>364</td>
<td>1.20</td>
<td>1.32</td>
</tr>
<tr>
<td>Voc.ed. importance</td>
<td>364</td>
<td>0.69</td>
<td>0.94</td>
</tr>
<tr>
<td>Country's future</td>
<td>364</td>
<td>0.52</td>
<td>0.98</td>
</tr>
</tbody>
</table>

Table 4.14: Reasons for freshmen to enroll in Technical Colleges.

**Research Objective 3**

The responses to the third research objective, “Determine the relationship between selected demographic characteristics (age, city size, parents’ job type, parents’ employer, parents’ education, family income, and high school type) and the freshmen’s attitude toward vocational-technical education and if the
freshmen's attitudes toward vocational-technical education differ based on their
demographic characteristics," were analyzed using Pearson Product Moment,
Spearman rank and Point-biserial Correlation Coefficients. Table 4.15 reports the
different types of measurement that have been used to meet this objective. This
objective will seek the answer to the following research questions:

1. What is the relationship between demographic characteristics and
freshmen's attitudes toward vocational education?

2. Is there a difference in freshmen's attitudes toward vocational education
based on demographic characteristics?
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Type of Data (Level of Measurement)</th>
<th>Correlation Coefficients Used with Students' Attitudes (Interval Level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Interval</td>
<td>Pearson (r)</td>
</tr>
<tr>
<td>City size</td>
<td>Nominal</td>
<td>Point-biserial (rpb)</td>
</tr>
<tr>
<td>Parent’s job type</td>
<td>Nominal</td>
<td>Point-biserial (rpb)</td>
</tr>
<tr>
<td>Parent’s employer</td>
<td>Nominal</td>
<td>Point-biserial (rpb)</td>
</tr>
<tr>
<td>Parent’s education</td>
<td>Ordinal</td>
<td>Spearman Rank (rs)</td>
</tr>
<tr>
<td>Family Income</td>
<td>Ordinal</td>
<td>Spearman Rank (rs)</td>
</tr>
<tr>
<td>High school type</td>
<td>Nominal</td>
<td>Point-biserial (rpb)</td>
</tr>
</tbody>
</table>

Table 4.15: Demographic characteristics, freshmen’s attitudes and correlation coefficients employed.

For the purpose of meaningful interpretation of all relationships, the scale developed by Davis (1971) was employed in this objective wherever it is applicable (Table 4.16).
<table>
<thead>
<tr>
<th>Magnitude of Correlation Coefficient</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>.70 or higher</td>
<td>Very strong relationship</td>
</tr>
<tr>
<td>.50 to .69</td>
<td>Substantial relationship</td>
</tr>
<tr>
<td>.30 to .49</td>
<td>Moderate relationship</td>
</tr>
<tr>
<td>.10 to .29</td>
<td>Low relationship</td>
</tr>
<tr>
<td>.01 to .09</td>
<td>Negligible relationship</td>
</tr>
</tbody>
</table>

Table 4.16: Correlation coefficients and the description of the magnitude of their relationships.

Table 4.17 shows that there is a negative negligible relationship (-.05) between student attitude and student age. Therefore, there are no significant relationships between the students' age and their attitude toward vocational-technical education.
### Demographics and Attitude Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Correlation</th>
<th>Sig.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (r)</td>
<td>-.05</td>
<td>.32</td>
<td>358</td>
</tr>
<tr>
<td>City size (rpb)</td>
<td>-.07</td>
<td>.17</td>
<td>364</td>
</tr>
<tr>
<td>Fathers’ job type (rpb)</td>
<td>-.04</td>
<td>.42</td>
<td>364</td>
</tr>
<tr>
<td>Fathers’ employer (rpb)</td>
<td>.03</td>
<td>.60</td>
<td>364</td>
</tr>
<tr>
<td>Mothers’ job type (rpb)</td>
<td>-.10*</td>
<td>.04</td>
<td>364</td>
</tr>
<tr>
<td>Mothers’ employer (rpb)</td>
<td>-.10*</td>
<td>.05</td>
<td>364</td>
</tr>
<tr>
<td>Income (rs)</td>
<td>.06</td>
<td>.25</td>
<td>342</td>
</tr>
<tr>
<td>Fathers’ education (rs)</td>
<td>-.05</td>
<td>.34</td>
<td>364</td>
</tr>
<tr>
<td>Mothers’ education (rs)</td>
<td>.03</td>
<td>.58</td>
<td>364</td>
</tr>
<tr>
<td>High school type (rpb)</td>
<td>-.09</td>
<td>.09</td>
<td>364</td>
</tr>
</tbody>
</table>

Table 4.17: Correlation between student attitude toward vocational-technical education and demographic characteristics.

As it has been illustrated in Table 4.17, there is a negligible negative relationship (-.07) between freshmen’s attitudes toward vocational-technical education and their city size. This fact indicates strongly that there are no
significant relationships between the students' city size and their attitudes toward vocational-technical education.

There is a negligible negative relationship (-.04) between freshmen's attitude toward vocational-technical education and their fathers' job type. This fact indicates that there are no significant relationships between the students' fathers' job and their attitude toward vocational-technical education (Table 4.17).

As it has been illustrated in Table 4.17, there is a negligible negative relationship (.03) between freshmen's attitudes toward vocational-technical education and their fathers' employer. This fact indicates that there are no significant relationships between the students' fathers' employer and their attitude toward vocational-technical education.

Table 4.17 indicates that there is a negative relationship (-.10), at the 0.05 significant level, between freshmen's attitudes toward vocational-technical education and their mothers' job type. This fact indicates that there are low relationships between the students' mothers' job type and their attitudes toward vocational-technical education, however it was in the negative side. This negative relationship could be explained by the fact that there were no mothers who worked in a vocational-technical job. Therefore, they might not encourage their siblings to enroll in the technical colleges. Instead, they were hoping that their sons would pursue the highest level of education. Also, and as it has been illustrated in table 4.17, the same results, of the relationship between mothers'
job type and students' attitudes, could be applied to the correlation between mothers' employer and students' attitude.

There is a negligible relationship (.06) between freshmen's attitudes toward vocational-technical education and their family income. This fact indicates strongly that there are no significant relationships between the students' family income and their attitudes toward vocational-technical education (Table 4.17).

There is a negative negligible relationship (-.05) between freshmen's attitudes toward vocational-technical education and their fathers' education. This fact indicates that there are no significant relationship between students' fathers' education and their attitudes toward vocational-technical education (Table 4.17).

As it has been illustrated in Table 4.17, there is a negligible relationship (.03) between freshmen's attitudes toward vocational-technical education and their mothers' education. This fact indicates that there are no significant relationships between the students' mothers' education and their attitudes toward vocational-technical education.

There is a negligible negative (-.09) relationship between freshmen's attitudes toward vocational-technical education and their high school type. This fact indicates that there are no significant relationships between the students' high school type and their attitudes toward vocational-technical education (Table 4.17).

Therefore, and as an answer to the first question in this objective, "What is the relationship between demographic characteristics and freshmen's attitudes
toward vocational education?" there is no significant relationship between
students' attitudes toward vocational-technical education and their demographic
characteristics except the relationship between freshmen attitudes and mothers'
job type and employer, which was in the negative side of the scale. So,
freshmen's demographic characteristics did not participate in creating their
attitudes toward vocational-technical education. In fact, some demographic
characteristics might participate negatively in creating the image of vocational-
technical education.

To answer the second question of this objective, "Is there a difference in
freshmen's attitudes toward vocational education based on demographic
characteristics?" and since this study includes a metric variable (attitudes of
freshmen) and some categorical variables (city size, parents vocations and
education, and high school type), analysis of variance (ANOVA) was computed
to investigate the differences between the means of the level of student attitudes
toward vocational-technical education and their demographic characteristics.

As it has been illustrated in Table 4.18, there is no significant statistical
difference in the attitudes of freshmen toward vocational-technical education
based on their age (.55). This means that students' attitudes toward vocational-
technical education do not differ based on their age.
### Freshmen Age and Attitude (ANOVA)

<table>
<thead>
<tr>
<th>Student Age</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.00</td>
<td>4</td>
<td>1.65</td>
<td>.75</td>
<td>.86</td>
<td>.55</td>
</tr>
<tr>
<td>19.00</td>
<td>66</td>
<td>1.88</td>
<td>.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.00</td>
<td>140</td>
<td>1.73</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.00</td>
<td>63</td>
<td>1.78</td>
<td>.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.00</td>
<td>41</td>
<td>1.77</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.00</td>
<td>34</td>
<td>1.78</td>
<td>.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.00</td>
<td>3</td>
<td>1.56</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.00</td>
<td>4</td>
<td>0.95</td>
<td>.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.00</td>
<td>2</td>
<td>1.20</td>
<td>.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.00</td>
<td>1</td>
<td>1.50</td>
<td>.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>358</td>
<td>1.76</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.18: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their age.

Table 4.19 illustrates that there are no significant differences between means of freshmen’s attitudes toward vocational-technical education based on their city.
size (.37). This fact indicates that students' attitudes toward vocational-technical education do not differ based on their type of city (urban, suburban or rural).

<table>
<thead>
<tr>
<th>City size</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>150</td>
<td>1.80</td>
<td>.75</td>
<td>.98</td>
<td>.37</td>
</tr>
<tr>
<td>Suburban</td>
<td>149</td>
<td>1.76</td>
<td>.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>65</td>
<td>1.64</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>1.76</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.19: Analysis of variance (ANOVA) between freshmen's attitudes toward vocational-technical education and their city size.

As it has been illustrated in Table 4.20, there is no statistical significant difference in the attitudes of freshmen toward vocational-technical education based on their fathers' job type (.69). This means that students' attitudes toward vocational-technical education do not differ based on their fathers' job type.
Father Job Type and Freshmen Attitude (ANOVA)

<table>
<thead>
<tr>
<th>Fathers’ job type</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>83</td>
<td>1.82</td>
<td>.77</td>
<td>.36</td>
<td>.69</td>
</tr>
<tr>
<td>Non-voc.</td>
<td>169</td>
<td>1.75</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No job</td>
<td>112</td>
<td>1.72</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>1.76</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.20: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their fathers’ job type.

Table 4.21 shows that there is no significant statistical difference in the attitudes of freshmen toward vocational-technical education based on their fathers’ employer (.17). This fact means that students’ attitudes toward vocational-technical education do not differ based on their fathers’ employer.
Table 4.21: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their fathers’ employer.

Table 4.22 shows that there is significant statistical difference in the attitudes of freshmen toward vocational-technical education based on their mothers’ job type (.03). This means that students’ attitudes toward vocational-technical education may differ based on their mothers’ job type. This result might be out of the high percentage of mothers who have no jobs, with which they might encourage or discourage their siblings to enroll in the technical colleges.
### Mother Job Type and Freshmen Attitude (ANOVA)

<table>
<thead>
<tr>
<th>Mothers' job type</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>4.58</td>
<td>.03</td>
</tr>
<tr>
<td>Non-voc.</td>
<td>25</td>
<td>2.08</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No job</td>
<td>339</td>
<td>1.74</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>1.76</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.22: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their mothers’ job type.

Table 4.23 shows that there is no significant statistical difference in the attitudes of freshmen toward vocational-technical education based on their mothers’ employer (.06). So, freshmen’s attitudes toward vocational-technical education do not differ based on their mothers’ employer.
Mother Employer and Freshmen Attitude (ANOVA)

<table>
<thead>
<tr>
<th>Mothers' employer</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>23</td>
<td>2.03</td>
<td>.70</td>
<td>2.90</td>
<td>.06</td>
</tr>
<tr>
<td>Non-Gov.</td>
<td>2</td>
<td>2.65</td>
<td>.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No job</td>
<td>339</td>
<td>1.74</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>1.76</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.23: Analysis of variance (ANOVA) between freshmen's attitudes toward vocational-technical education and their mothers' employer.

Table 4.24 shows that there is no significant statistical difference in the attitudes of freshmen toward vocational-technical education based on their family income (.37). Therefore, students' attitudes toward vocational-technical education do not differ based on their family income.
<table>
<thead>
<tr>
<th>Income</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;$10,000</td>
<td>84</td>
<td>1.67</td>
<td>.84</td>
<td>1.07</td>
<td>.37</td>
</tr>
<tr>
<td>$10,000-$15,000</td>
<td>63</td>
<td>1.75</td>
<td>.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$15,000-$20,000</td>
<td>72</td>
<td>1.79</td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$20,000-$25,000</td>
<td>52</td>
<td>1.65</td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$25,000 and more</td>
<td>71</td>
<td>1.88</td>
<td>.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>342</td>
<td>1.75</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.24: Analysis of variance (ANOVA) between freshmen’s attitudes toward vocational-technical education and their family income.

Table 4.25 shows that there is no significant statistical difference in the attitudes of freshmen toward vocational-technical education based on their fathers' education (.77). This result means that students' attitudes toward vocational-technical education do not differ based on their fathers' education.
Father Education Level and Freshmen Attitude (ANOVA)

<table>
<thead>
<tr>
<th>Fathers' Education</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>74</td>
<td>1.86</td>
<td>.78</td>
<td>.51</td>
<td>.77</td>
</tr>
<tr>
<td>Elementary</td>
<td>119</td>
<td>1.74</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>75</td>
<td>1.73</td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>48</td>
<td>1.66</td>
<td>.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.A.</td>
<td>43</td>
<td>1.81</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>5</td>
<td>1.64</td>
<td>.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>1.76</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.25: Analysis of variance (ANOVA) between freshmen's attitudes toward vocational-technical education and their fathers' education.

Table 4.26 illustrates that there are no significant statistical differences between means of freshmen's attitudes toward vocational-technical education based on their mothers' educational level (.16). This fact indicates that students' attitudes toward vocational-technical education do not differ based on their mothers' education.
<table>
<thead>
<tr>
<th>Mothers' Education</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>177</td>
<td>1.77</td>
<td>.78</td>
<td>1.64</td>
<td>.16</td>
</tr>
<tr>
<td>Elementary</td>
<td>101</td>
<td>1.70</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>36</td>
<td>1.59</td>
<td>.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>33</td>
<td>2.01</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.A.</td>
<td>17</td>
<td>1.91</td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>1.76</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.26: Analysis of variance (ANOVA) between freshmen's attitudes toward vocational-technical education and their mothers' education.

Table 4.27 shows that there are no significant statistical differences in the attitudes of freshmen toward vocational-technical education based on their high school type (.18). Students' attitudes toward vocational-technical education do not differ based on their high school type.
High School Type and Freshmen Attitude (ANOVA)

<table>
<thead>
<tr>
<th>High school type</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>328</td>
<td>1.78</td>
<td>.78</td>
<td>1.81</td>
<td>.18</td>
</tr>
<tr>
<td>Vocational</td>
<td>36</td>
<td>1.60</td>
<td>.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>364</td>
<td>1.76</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.27: Analysis of variance (ANOVA) between freshmen's attitudes toward vocational-technical education and their high school type.

Research Objective 4

The fourth research objective, "Evaluate the relationship between freshmen's attitudes toward vocational-technical education, and their customs' and traditions' appreciations, religious beliefs, vocational preferences," was analyzed using Pearson Product Moment and Spearman rank Correlation Coefficients. This research objective will answer the following research questions of the study:

1. Is there a relationship between freshmen's attitudes toward vocational education and their religious beliefs?
2. Is there a relationship between freshmen's attitudes toward vocational education and their traditions and customs?
3. Is there a relationship between freshmen's attitudes toward vocational education and their perceptions of vocations?
Religious beliefs have been measured by section one of part one of the survey. There were seven items and each item has two-choices (strongly religious or moderately religious). The answers to the questions have been grouped by the strongest item (item number 3) of the seven items listed in the questionnaire.

The relationship between freshmen’s attitudes toward vocational education and their religious beliefs is shown in Table 4.28. Low correlation (.15) was found between religious beliefs and freshmen’s attitudes toward vocational-technical education.
Religion, Vocations & Customs Correlations to Freshmen Attitude

<table>
<thead>
<tr>
<th></th>
<th>Religion</th>
<th>Vocations</th>
<th>Customs</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>364</td>
<td>364</td>
<td>364</td>
</tr>
<tr>
<td>Mean</td>
<td>1.80</td>
<td>1.63</td>
<td>2.25</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.39</td>
<td>.48</td>
<td>.29</td>
</tr>
<tr>
<td>Correlation</td>
<td>.15**</td>
<td>-.15**</td>
<td>.14**</td>
</tr>
<tr>
<td>Sig.</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level.

Table 4.28: Correlation between student attitudes toward vocational-technical education and their religious beliefs, customs & vocations.

Freshmen's customs and traditions have been measured by section two of part one of the survey. This section is composed of 16 items. A four-point scale measured each item. The categories for each item were (1) strongly disagree, (2) disagree, (3) agree, (4) strongly agree. The mean level of freshmen's customs and traditions appreciations was 2.25 and the standard deviation was .29 (Table 4.28). Therefore, freshmen's mean fall in the disagreement level (Table 4.29), which means the freshmen did not appreciate their customs and traditions.
<table>
<thead>
<tr>
<th>Mean range</th>
<th>Agreement level</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.26-4.00</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>2.51-3.25</td>
<td>Agree</td>
</tr>
<tr>
<td>1.76-2.50</td>
<td>Disagree</td>
</tr>
<tr>
<td>1.00-1.75</td>
<td>Strongly disagree</td>
</tr>
</tbody>
</table>

Table 4.29: Description of Likert-type question mean value on the scale of freshmen’s customs’ and traditions’ appreciations.

As it has been illustrated in Table 4.28, the correlation between freshmen’s attitudes toward vocational-technical education and their customs and traditions appreciations is significant. Low correlations (.14) were found between freshmen’s customs and traditions and their attitudes toward vocational-technical education. Although students did not appreciate their customs and traditions, it could be one of the factors that participated in their attitudes toward vocational-technical education.

Vocational preferences have been measured by section one of part two of the survey. There were nine items and each item had two-choices: (a) office (management) job preference (b) vocational (hands-on) job preference. In order to analyze the data in this section, the answers to the questions have been grouped by the strongest item (item number 1) of the nine items listed in the
survey. Negative, low correlations (-.15) were found between freshmen's' attitudes toward vocational-technical education and their vocational preferences. In this study, freshmen who prefer vocational jobs tend to have negative attitude toward vocational-technical education (Table 4.28).

Overall, although there are relationships, freshmen's attitudes toward vocational-technical education in relation to their beliefs and preferences tend to be in the lower level of correlation (.10-.29). However, religious beliefs and customs' and traditions' appreciations relationships to the freshmen's attitudes are in the positive lower level. Therefore, even though religion, customs and traditions relationships to students' attitude were significant, it was only weak relationships. Thus, religion, customs and traditions might not participate strongly in students' attitudes toward vocational-technical education.

At the same time, vocational preferences relationship to the freshmen's attitudes was in the negative lower level. So, regardless of the direction of the relationship, which is in the negative side, vocational preferences relationships to students attitude was weak and might not contribute to the freshmen enrollment in technical colleges.

As an overall result, although there are relationships between freshmen's attitudes and their customs & traditions, religious beliefs and vocational preferences, all relationships were in the lower level of the scale, which might not contribute to the freshmen decision to enroll in technical colleges.
Research Objective 5

The fifth research objective, "Investigate the relationship between freshmen's attitudes toward vocational-technical education and the attitudes toward vocational education of people related to them (parents, peers, and teachers)," was measured by the second portion of the second section of Part II of the questionnaire. This section contained one question: "What is your perceptions of the attitudes of the people around you (parents, peers and teachers) toward vocational-technical education? With four-point scale (1) Strongly support it, (2) Support it, (3) Do not support it, (4) Strongly do not support it.

The responses to the fifth objective were analyzed using Pearson Product Moment Correlation Coefficients. This research objective will answer the following research questions of the study:

1. Is there a relationship between freshmen’s attitudes toward vocational education and their perceptions of their parents’ attitudes toward vocational-technical education?
2. Is there a relationship between freshmen’s attitudes toward vocational education and their perceptions of their teachers’ attitudes toward vocational-technical education?
3. Is there a relationship between freshmen’s attitudes toward vocational education and their perceptions of their peers’ attitudes toward vocational-technical education?
The researcher used the scale in Table 4.30 to evaluate the mean scores of all responses related to the attitudes of the people around the freshmen toward vocational-technical education.

<table>
<thead>
<tr>
<th>Mean range</th>
<th>Supporting level</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.26-4.00</td>
<td>Strongly do not support it</td>
</tr>
<tr>
<td>2.51-3.25</td>
<td>Do not support it</td>
</tr>
<tr>
<td>1.76-2.50</td>
<td>Support it</td>
</tr>
<tr>
<td>1.00-1.75</td>
<td>Strongly support it</td>
</tr>
</tbody>
</table>

Table 4.30: Description of Likert-type question mean value on the scale of the attitudes of the people around the freshmen toward vocational-technical education.

As it has been illustrated in Table 4.31, the people around the respondents were supporting vocational-technical education. Parents mean was in the strongly supportive level of the scale (1.00-1.75). This result comes in line with the reasons for students to enroll in technical colleges results which indicate that fathers' preference was the only reason that might influence the student decision to enroll in technical colleges. However, The mean results of the teachers and
friends were in the range of supporting (1.76-2.50) freshmen in their decision to enroll in vocational-technical education.

<table>
<thead>
<tr>
<th>People Attitude</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers attitude</td>
<td>1.96</td>
<td>0.78</td>
<td>364</td>
</tr>
<tr>
<td>Parents attitude</td>
<td>1.72</td>
<td>0.77</td>
<td>364</td>
</tr>
<tr>
<td>Friends attitude</td>
<td>2.05</td>
<td>0.88</td>
<td>364</td>
</tr>
</tbody>
</table>

People's attitudes legend: 1. strongly support it; 2. support it; 3. did not support it; 4. strongly did not support it.

Table 4.31: Attitudes of the people around freshmen toward vocational-technical education.

The responses to the first question indicate that there is significant relationship between freshmen's attitudes and their parents' attitudes toward vocational-technical education. Low correlations (.17) were found between freshmen's attitudes and their parents' attitudes toward vocational-technical education (Table 4.32). Parents' attitudes toward vocational-technical education support students' attitudes.
The responses to the second question indicate a significant relationship between freshmen's attitudes and teachers' attitudes toward vocational-technical education. However, as it has been illustrated in Table 4.32, that relationship is in the low level of correlation (.22). This fact indicates that teachers supported students' attitudes toward vocational-technical education with positive attitudes.

The responses to the third question indicate a significant relationship between freshmen's attitudes and peers' attitudes toward vocational-technical education. The correlations (.19) in this question are in the lower level of relationship (Table 4.32). Therefore, freshmen's peers, in this study, supported their positive attitudes toward vocational-technical education.

Overall, although there are relationships, freshmen's attitudes toward vocational-technical education in relation to the attitudes of the people around them tend to be in the lower level of correlation (.10-.29).

So, freshmen's attitudes toward vocational-technical education related positively to the attitudes of the people around them toward vocational-technical education. However, although there are positive relationships between students' attitude toward vocational-technical education and people around them attitude toward vocational-technical education, the relationship is weak (low correlation).

For the above mentioned reason, people's attitude toward vocational-technical education might not influence students' decision to enroll in technical colleges. And if it does influence, then that influence is very limited and minor.
People Attitude and Freshmen Attitude

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Correlations</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers' attitudes</td>
<td>1.97</td>
<td>0.22**</td>
<td>.00</td>
</tr>
<tr>
<td>Parents' attitudes</td>
<td>1.72</td>
<td>0.17**</td>
<td>.00</td>
</tr>
<tr>
<td>Friends' attitudes</td>
<td>2.05</td>
<td>0.19**</td>
<td>.00</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level.

Table 4.32: Correlations coefficients between freshmen's attitudes and the attitudes of the people around them (teachers, parents, and friends) toward vocational-technical education.

Multiple regressions analysis was used to determine what percentage of the variance in freshmen's attitudes was explained by each independent variable. The following independent variables were entered into the regression equation: religious beliefs, vocational preferences, customs and traditions appreciations, friends' attitudes, parents' attitudes, teachers' attitudes, age, city size, fathers' occupation, mothers occupations, parents education, income, and high school type. A review of the analysis indicates that five independent variables contributed to explaining the variance accounted for the student attitude. The variables included are: customs, religion, teachers' attitude, friends' attitude and parents' attitude. The variables of vocational preferences, age, city size, fathers'
occupation, mothers' occupation, parents' education, income and high school type did not enter the regression equation, which indicates that the variables were not statistically significant.

The stepwise multiple regression analysis of the linear combination of five independent variables regressed on the dependent variable resulted in an explanation of %13 of the variance (Table 4.33). The test statistic of the final model (F = 9.14, p < .001) reveals that the variance explained by the full model is statistically significant.

<table>
<thead>
<tr>
<th>Overall regression</th>
<th>R</th>
<th>R2 change</th>
<th>F</th>
<th>Sig. F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.36</td>
<td>13.3</td>
<td>9.14</td>
<td>.00</td>
</tr>
</tbody>
</table>

Independent variables entered into equation: Teachers' attitude, religion, customs, parents' attitude, and friends' attitude. (Alpha=.05)

Table 4.33: Results of multiple regressions equation of the dependent variable on the independent variables.
Although, the regression model was significant, the contribution that the independent variables have to the variance is very low. Customs accounted for the largest portion of the explained variance (Beta .153). Religion, friends' attitude and teachers' attitude, with equal weights (Beta .13) were accounted for the second largest portions of the explained variance (Table 4.34). The remaining variance was accounted for by the variable parents attitude (Beta .11).

In multiple regression equations, multicollinearity could be a problem. Multicollinearity is defined as a situation in which two or more predictor variables are very highly correlated with each other and, in turn, affect the explained variance (Kachigan, 1991). Two of the more common measures for assessing multicollinearity are Tolerance Value and Variance Inflation Value (Hair, 1998). A common cutoff threshold is a tolerance value of 0.1 (VIF=1/tolerance=10), which denotes high multicollinearity. The tolerance in the multiple regression equation in this study was ranged between .970 and .832 and VIF values ranged between 1.202 and 1.031. Therefore, both tolerance and VIF indicated that multicollinearity was not a problem because the highest level of tolerance was < .01 and the highest level of VIF was 1.2 (Table 4.34).
<table>
<thead>
<tr>
<th>Independent variables entered into equation</th>
<th>B</th>
<th>Beta</th>
<th>Sig.</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customs</td>
<td>.39</td>
<td>.15</td>
<td>.00</td>
<td>.954</td>
<td>1.048</td>
</tr>
<tr>
<td>Religion</td>
<td>.25</td>
<td>.13</td>
<td>.01</td>
<td>.970</td>
<td>1.031</td>
</tr>
<tr>
<td>Teacher attitude</td>
<td>.13</td>
<td>.13</td>
<td>.01</td>
<td>.838</td>
<td>1.193</td>
</tr>
<tr>
<td>Friends attitude</td>
<td>.11</td>
<td>.13</td>
<td>.01</td>
<td>.837</td>
<td>1.195</td>
</tr>
<tr>
<td>Parents attitude</td>
<td>.11</td>
<td>.11</td>
<td>.03</td>
<td>.832</td>
<td>1.202</td>
</tr>
</tbody>
</table>

Table 4.34: standardized and unstandardized coefficients of student attitudes on religion, customs perceptions mother job type and other peoples' attitudes.
CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter contains the following sections: summary, conclusions and recommendations. The summary section states the purpose of the study; briefly outlines the research objectives and questions, describes the methodology and procedures; and summarizes the study findings. The conclusions section provides the study conclusions based on the data presented in this study. Finally, based on the conclusions, the recommendations section addresses any future studies or actions needed.

Summary

The purpose of this study was to examine the freshmen in Saudi technical colleges attitudes toward vocational-technical education. A secondary purpose was to investigate variables that might be related to students’ attitudes toward vocational-technical education. Variables studied are students’ religious beliefs, traditions and customs appreciations, parents’, teachers’, friends’ attitudes toward vocational-technical education and selected freshmen’s demographic characteristics.
The target population for this study is technical college freshmen in Saudi Arabia. The frame for this study was the first-year technical college students (freshmen) in Saudi Arabia. The accessible population was technical college freshmen in all Saudi technical colleges in the 1999-2000 school year (N=15,592), which included Riyadh, Jeddah, Dammam, Buraidah, Ahsa, Abha, Madinah, Hail, and Makkah technical colleges. Lists of freshmen’s names in all Saudi technical colleges during the 1999-2000 school year were obtained from GOTEVT and served as the frame for this study. A proportional stratified random sample of freshmen in all Saudi technical colleges was drawn from the student lists. According to Krejcie & Morgan (1970), a representative sample of a population of N = 15,592, within a five percent margin of error, was 375. Three hundred seventy-five questionnaires were distributed, and three hundred sixty-four (97%) were returned after three follow-up mailing made to the late respondents.

The instrument was adapted partly from a similar study conducted by Alghofaily (1980) (Saudi youth attitudes towards work and vocational education). The current study’s questionnaire consisted of three parts. Part I was designed to collect data related to the student perceptions of their religious beliefs and social customs and traditions. Part II was developed to gather data on the perceptions of the students and the people around them toward vocations and vocational-technical education. Part III is related to collecting data in regard to students’ demographic characteristics. The instrument was tested for face and content
validity by a panel of experts. Reliability for the instrument was conducted by a pilot test and to assure internal consistency, test-retest procedures were used.

The data were coded and entered into the computer using SPSS 10.05 for Windows. The analysis involved frequency, descriptive, correlational and ANOVA statistics. Since most of the measurements were classified as interval, ordinal, and nominal, the Pearson’s r, Spearmen rank, and point biserial coefficients were found appropriate to describe the degree of relationship between the study’s dependent and independent variables.

Nine research questions were developed to guide this study:

1. What is the attitude of Saudi technical colleges’ freshmen toward vocational-technical education?

2. Is there a relationship between freshmen’s attitudes toward vocational-technical education and their religious beliefs?

3. Is there a relationship between freshmen’s attitudes toward vocational-technical education and their perceptions of their parents’ attitudes toward vocational education?

4. Is there a relationship between freshmen’s attitudes toward vocational-technical education and their perceptions of their teachers’ attitudes toward vocational education?

5. Is there a relationship between freshmen’s attitudes toward vocational-technical education and their perceptions of their peers’ attitudes toward vocational education?
6. Is there a relationship between freshmen's attitudes toward vocational-technical education and their traditions and customs?

7. Is there a relationship between freshmen's attitudes toward vocational-technical education and their perceptions of vocations?

8. What is the relationship between demographic characteristics and freshmen's attitudes toward vocational education?

9. Is there a difference in freshmen's attitudes toward vocational education based on demographic characteristics?

The following is an outline of the major findings in this study:

**Research Objective 1:** Identify the demographic characteristics of the Saudi technical colleges' freshmen: age, city size, parents' job type, parents' employer, parents' education, family income, and high school type.

This research objective was analyzed using frequency distribution, means and standard deviations. The responses to questions 1 through 7 of the third part of the study instrument were used for this research objective. The major findings relative to the demographics of the Saudi technical colleges freshmen were as follows:

The mean age of the respondents was 21 years old. The majority of the freshmen (299 students) stated they live in either urban or suburban cities (82.1%).

Parents' occupation, employer and education have been analyzed in this study. The average for fathers' employer was government. One hundred and
eighty-six freshmen from the sample indicated that their fathers work in a government agency (51.1%). One hundred and twelve freshmen stated that their fathers have no jobs (30.8%), while 66 freshmen’s fathers (18.1%) were working in the private sector (non-government). The average fathers’ job type was non-vocational job. The majority (169) of freshmen’s fathers’ work was in non-vocational jobs (46.4%). However, 112 freshmen (30.8%) pointed out that their fathers have no jobs. Only 83 (22.8%) participants of the sample indicated that their fathers have vocational jobs.

On the other hand, freshmen’s mothers tend to be out of jobs. The majority of the mothers, 339 (93.1%), are out of jobs. Not a single mother, among the sample’s mothers, works in a vocational job. The results of mothers’ job type analysis could be applied to mothers’ employer. The reason for that is that the majority of the mothers are out of jobs. Three hundred and thirty-nine (93.1%) mothers are without employer. Twenty-three mothers (6.3%) are working in government agencies and only 2 mothers (0.5%) work in the non-governmental sector.

Freshmen’s fathers’ educational level tends to be in the lower level (illiteracy or elementary level) more than in the higher level of the scale (high school or bachelor's degree). Fathers’ educational mean is 2.67, where 1 means illiterate education and 6 means post bachelor’s education. At the same time, the average mother has little or no education (1.93), where 1 means no education and 5 means undergraduate education (Table 4.11).
The biggest group (87) of freshmen 23.9% reported the least annual income (less than $10,000). However, the smallest group (56) of freshmen 15.4% was in the fourth level of the scale ($20,000-24,999). Most of the freshmen who entered the study 325 were academic high school graduates (89.3%).

Research Objective 2: Describe the attitudes of first-year students (freshmen) in the Saudi technical colleges toward vocational-technical education.

This research objective was analyzed using means and standard deviations. Section two of Part II of the questionnaire was devoted to this objective by asking the respondents "why they chose technical colleges," and listing 12 items that may answer this question. A five-point Likert scale measured each item. The categories for each item were (1) strongly agree; (2) agree; (3) disagree; (4) strongly disagree; (5) not applicable. The major findings are as follows:

Overall, all items in this part of the survey, except item number 6, "fathers' preference," which was classified in the agreement level (4.0), were classified in the disagreement, strong disagreement or not applicable level. No single item was classified in the strong agreement level category. This fact indicates that the main and only possible reason for students to have positive attitude toward vocational-technical education is their fathers' preference of vocational-technical education. On the contrary, the importance of the country's future and the role of vocational-technical education in their life were in the not applicable category, therefore those items results have been eliminated from the study. Higher level of
payment, hands-on jobs preference, and government support did not contribute
to creating their decision to enroll in vocational-technical education.

**Research Objective 3:** Determine the relationship between selected demographic
characteristics (age, city size, parents' job type, parents' employer, parents'
education, family income, and high school type), the freshmen's attitudes toward
vocational-technical education, and if the freshmen's attitudes toward vocational-
technical education differ based on their demographic characteristics.

This research objective was analyzed using Pearson Product Moment,
Spearman Rank, Point-Biserial Correlation Coefficients and Analysis of Variance
(ANOVA). The major findings were as follows: there are no significant
relationships between student attitudes toward vocational-technical education
and their demographic characteristics. All of the demographic characteristics had
negligible relationships with student attitude toward vocational-technical
education. Therefore, freshmen's demographic characteristics did not participate
in creating their attitude toward vocational-technical education. In addition, there
was no significant statistical difference in the attitude of freshmen toward
vocational-technical education based on their demographic characteristics.

**Research Objective 4:** Evaluate the relationship between freshmen's attitudes
toward vocational-technical education and their customs' and traditions'
appreciations, religious beliefs and vocational preferences.

This research objective was analyzed using Pearson Product Moment and
Spearman Rank Correlation Coefficients to determine if there was significant
attitude change based on students’ traditions, customs, preferences, and beliefs. The findings indicate that there was low correlation (.15) between religious beliefs and freshmen’s attitudes toward vocational-technical education. Even though students did not appreciate their customs and traditions, there were low correlations (.14) between them and students’ attitudes toward vocational-technical education. Negative, low correlations (-.15) were found between freshmen’s attitudes toward vocational-technical education and their vocational preferences. In this study, freshmen who prefer vocational jobs tend to have negative attitudes toward vocational-technical education.

Overall, although there are relationships, freshmen’s attitudes toward vocational-technical education in relation to their beliefs and preferences tend to be in the lower level of correlation (.10-.29). However, religious beliefs and customs’ and traditions’ appreciations relationship to the freshmen attitudes is in the positive lower level, while vocational preferences relationship to the freshmen’s attitudes was in the negative lower level.

Research Objective 5: Investigate the relationship between freshmen attitudes toward vocational-technical education and the attitudes of the people’s related to them (parents, peers, and teachers) toward vocational education.

This research objective was analyzed using descriptive statistics (means and standard deviations). Pearson Product Moment Correlation Coefficients was implied to evaluate the relationships between the students’ attitudes toward vocational-technical education and the attitudes of the people related to them.
(parents, peers, and teachers) toward vocational-technical education. The mean results of the study show that teachers, parents, and friends in the range of supporting (1.1-2.0) freshmen in their attitudes toward vocational-technical education (1 means strongly support it and 4 means strongly do not support it).

There were significant low correlations (.17) between freshmen’s attitudes and their parents’ attitudes toward vocational-technical education. Low correlations were also found between freshmen’s attitudes and their teachers’ attitudes toward vocational-technical education (.22). Significant relationship between freshmen’s attitudes and peers’ attitudes toward vocational-technical education were also found. The correlations (.19) in this part were in the lower level of relationship, as well.

Overall, although there are relationships, freshmen’s attitudes toward vocational-technical education in relation to the people around them tend to be in the lower level of correlation (.10-.29). Therefore, freshmen’s attitudes toward vocational-technical education related positively to the attitudes of the people’s around them toward vocational-technical education.

Conclusions

Based on the study’s findings, the following conclusions are drawn:

1. The findings of this study support many of those found in Raddady (1977) and Alghofaily (1980) studies. Both Raddady and Alghofaily stated that the major problem vocational-technical education has in Saudi Arabia been
student attitude toward manual work. In fact, Alghofaily (1980) stated that Saudi youth have a low acceptability of manual work and economic incentives of vocational-technical jobs. In this study, freshmen put hands-on jobs in the strong disagreement level of the scale as a reason that might influence them in their decision to enroll in technical colleges. Although the biggest group of freshmen (23.9%) was at the lower economical level, this study’s participants indicated clearly that job salary, government support of vocational-technical education or job ranking have no influence on their decisions to enroll in technical colleges.

2. In spite of the fact that most of the fathers are working in non-vocational jobs (46.4%) and more than one-half of the fathers have elementary education or no education, fathers’ preference of vocational-technical education is the only possible influence in students’ decision to enroll in vocational-technical education. Steinberg (1989) stated that parents’ education and income are very important elements of an adolescent’s personal occupation and ideological commitments. This study supports Steinberg’s notion of the impact of the parents’ education and level of income on youth future determination. As it has been mentioned before, the biggest group is in the lower level of the economical scale and at the same time parents’ level of education was also in the lower scale (illiterate/elementary). These findings could be the major elements that
direct the samples' fathers to support their siblings' choice of vocational-technical education.

3. The results of the analysis indicated that student age and region (urban, suburban or rural) has no significant relationship to Saudi freshmen's attitudes toward vocational-technical education. Parents' occupation, family income and high school type also have no significant relationship to students' attitudes; but when some elements of freshmen's demographics do have any relationships, that relationship will be negative. This negative correlation indicates that those elements contribute to developing negative attitudes toward vocational-technical education.

4. This study's findings demonstrated that customs' and traditions' appreciations, religious beliefs, vocational preferences have relatively significant relationships to students' attitudes toward vocational-technical education. Although the relationship between the student customs, vocations and religion and their attitude toward vocational-technical education was significant, it was, in general, at the lower level. Religion related positively to the students' attitudes (.01 significance). This result is consistent with previous research which found religion to be the most influential factor on Saudi students' decisions to enroll in technical colleges (Alnais, 1991).

   Freshmen's appreciation of their customs and traditions was categorized in the disagreement level (the mean result was 2.25 out of
4.00). At the same time, relationships between customs' and traditions' appreciation and students' attitudes toward vocational-technical education were significant at the .01 significant level; and it was in the lower level of the scale (.14). In addition, and when all independent variables were entered in the multiple regression equation, customs and traditions accounted for the largest portion of the explained variance. These results indicate that, even though students did not appreciate their customs and traditions, there were significant low correlations between the customs and tradition and the students attitude toward vocational-technical education. Therefore, these results contradict many prior research findings which indicated that people in any society normally take their social habits more than any other factor in their life (Alaki, 1972; Henderson, 1984; Alsaedi & Alsehail, 1989).

This fact, of freshmen not appreciating their customs and tradition and the weak relationship between customs and traditions and their attitudes toward vocational-technical education, may imply that there was a Saudi technical colleges freshmen's attitude change toward their customs and traditions. That attitude change toward customs and traditions could be related to cohort effects, where younger generations with different attitudes replace older generations (Katarina, 1996). Generations’ replacement was not isolated from the new generation life positions, which is not that shiny as older generations (Kahle, 1984).
As it has been indicated in previous research, vocational preferences are normally not in favor of vocational-technical jobs or education (Raddady, 1977; Alghofaily, 1980). Although vocational preferences were significantly correlated with freshmen's attitudes toward vocational-technical education, it was in the low negative side of the correlation (-.15). This negative relationship, although weak, suggests that freshmen's vocational preferences might contribute to developing unappreciative attitudes toward vocational-technical education.

5. In previous research, people around the student have been found to influence students' attitudes toward vocational-technical education. However, most early research indicates that people around students influence students' attitudes negatively (Eschenmann & Olinger, 1989; Steinberg, 1989; Philips et al., 1991; Okojie, 1998). Unlike previous research, people around the respondents, in this study, were supporting vocational-technical education. The mean results of the study shows that teachers, parents, and friends in the range of supporting (1.1-2.0) freshmen in their attitudes toward vocational-technical education. Freshmen's attitudes toward vocational-technical education in relation to the people around them tend to be in the lower positive level of correlation (.10-.29). Therefore, freshmen's attitude toward vocational-technical education was encouraged slightly by the attitude of people around them toward vocational-technical education.
6. Most of the subjects in this study were academic high school graduates. The technical college at Madinah was the only college that has all its freshmen from technical high schools (29). The other nine colleges have all their freshmen (346) graduated from academic high schools. Therefore, high school type was not a factor that motivates students to enroll in technical colleges; because they have the chance to enroll in universities.

7. In general, all the independent variables included in this study did not participate, convincingly, in shaping students attitudes toward vocational-technical education. At the same time, this study contradicts with almost all the prior similar studies. Not even a single independent variable in the study shows a moderate or strong relationship with the dependent variable. This fact opens up the door for many new variables that might affect the results of this study. Those new variables might have more relations to the freshmen in technical colleges attitudes toward vocational-technical education as well. Such variables might include the following:

   a. Globalization: In the past 10 years or so, Saudi Arabia has opened its society to global telecommunication, satellite dishes were legalized, and space channels were implemented. Therefore, and as Katarina (1996) mentions cohort (replacement) effects, where generations with different attitudes replace their older counterparts could be one of the factors that influence students to indicate in this study that they do not appreciate their customs and traditions. Or
religious beliefs did not have a strong relationships to students' attitudes toward vocational-technical education, though, the last study that have been made on Saudi technical colleges students' attitude toward vocational-technical education (Alnais, 1991) showed that religion was the most influential factor on Saudi students' decisions to enroll in technical colleges. Therefore, and by the introduction of a global prospective of the world's cultures, Saudis' perceptions of their religion, customs and traditions might not hold its old and only high place of the people's life; instead, religion and customs might be less regarded, in some aspects, as the norms of the life.

b. Unemployment rate: One of the reasons that might intervene this study results is unemployment rate. Mellahi (2000) mentions that Saudi Arabia has one of the highest population growth rate of 3.5%. More than 50% of the population is under the age of 15. With the government limited resources which would not grant for every citizen a job in the public sector, and the people's image of government jobs which is in favor, unemployment rate is expected to be rising. Although there are no official data on unemployment in Saudi Arabia, officials accept the fact that the number of young Saudis out of work is increasing rapidly (Mellahi, 2000).
Therefore, unemployment rate, a variable that is not included in this study, could contribute to the students’ attitude toward vocational-technical education. Students might favor vocational-technical education on academic education in order to guarantee a job after graduation.

c. Saudisation: The government of Saudi Arabia is aiming to improve the capacity and performance of the vocational education training system as a mean of increasing the national supply of skilled people compatible with the needs of the economy (Mellahi, 2000). The government, Mellahi (2000) continues, is seeking to control and regulate labor importation and employment and replace foreign workers with Saudis. ‘Saudisation’, therefore, has become a buzzword in Saudi Arabia. The sixth National Development Plan (1995-2000) emphasized the importance of expatriate workers replacement by Saudi workers. That plan set as a goal that 95% of the expected increase in the number of Saudi workers in the 1995-2000 will occur in the private sector; these jobs will be manual jobs requiring vocational skills (Mellahi, 2000). Accordingly, and due to the fact that most of the universities graduates could not find jobs easily, students who enrolled in technical colleges might recognize vocational-technical education as the only way to get a job.
Recommendations

The following recommendations are based upon the findings of this study:

1. Although this study indicated some improvement in the attitude of students toward vocational-technical education, such progress was not enough to enhance the country's labor situation. Alghofaily (1980) stated "changing of people's attitudes and behaviors to be more productive and their readiness to adapt to economic demands are prerequisites for developing Saudi Arabia, the Saudi youth who are the future labor force should be more adapted to changes and demands of development." It is not enough to have students enrolling in vocational-technical institutions. It is rather important that those students enroll with the belief that vocational-technical education is the best choice for their abilities and their lives. Therefore, students suppose to be introduced to vocational-technical education in their early educational career (k-12), so that they can choose the best higher educational path (college level) based on their past educational experience.

2. This study indicated that students enrolled in technical colleges out of factors other than their personal preferences—such factors as their fathers’ preference. Otherwise they may not enroll in such institutions! For that reason, and as a short term solution, GOTEVT should implement a high school student recruitment program that explains to them different
specialties in the technical colleges and the marketplace for such specialties.

3. Although customs and traditions were not appreciated by the study sample, it was the most important variable, among all the independent variables, that contributed to the variance of the attitude of Saudi technical colleges freshmen toward vocational-technical education. Thus, examining the various parts of the Saudi customs and traditions with an emphasis on parts that are related to vocational-technical education. This recommendation aims to increase the society's acceptance to vocational-technical education.

4. This study captured only a few possible factors associated with the attitudes of freshmen in Saudi technical colleges toward vocational-technical education. Other factors that could be related to freshmen's attitudes toward vocational-technical education can be included in future studies, such factors as mass communication impact, teachers' survey, parents' survey, and peers' survey.

5. For the purpose of high school students' attitude toward vocational-technical education, who are the customers of technical colleges, further studies would also be desirable to investigate the relationships between high school students and the attitudes of the people around them toward vocational-technical education. Studying high school students attitudes toward vocational-technical education will allow vocational education
planners to recognize high school expectations in an effort to meet those expectations and have them consider technical colleges one of their useful educational future alternatives.

6. Furthermore, this study will enrich the research field of students' attitudes outside and inside vocational education—which will be a significant tool to compare the two groups of students' viewpoints and determine similarities and differences between both groups (academic and vocational students).

7. It is suggested to replicate this study on those freshmen who have been included in this study before they graduate from their technical colleges and compare their responses. This is recommended in order to detect if there are any changes in the students' attitudes toward vocational-technical education during their college program. It is, also, suggested to keep following up those students after they enroll in their jobs and evaluate their attitudes toward vocational-technical education periodically.

8. University freshmen's attitudes toward vocational-technical education are worth investigating. Those freshmen will not have the chance to enroll in vocational-technical institutions. Therefore, are their attitudes different than those who enrolled in vocational-technical education? If so, why? This investigation will broaden the scope of research and provide a wide range of students' perspectives of vocational-technical education.
9. This study was conducted using survey research methodology; it is recommended that similar studies be conducted using different methodology. Such methodologies as interviews and qualitative studies.


http://scholar.lib.vt.edu/ejournals/JVTE/v14n2/JVTE-2.html


Eschenmann, K.K. & Olinger, P.B. (1989). *Barriers adults face when enrolling in technical education programs at two year and four year institutions*. Blacksburg, VA: Virginia Polytechnic Institute and State University, Division of Vocational-Technical Education.


APPENDICES
APPENDIX A

SURVEY INSTRUMENT

ATTITUDES OF FRESHMEN IN SAUDI TECHNICAL COLLEGES TOWARD

VOCATIONAL-TECHNICAL EDUCATION
PART I

1st. We would like you to evaluate some proverbs and sayings about life in general. Every two proverbs put together. Choose only one proverb from each pair. For example, in the first pair there are 1 and 2, read both 1 and 2 and circle the one that appeals most to you.

1. Spend what you have in your pocket, Allah (God) shall send you from the unknown.
2. Stretch your carpet in accordance with the length of your legs.

1. The wise man reaps today's harvest for tomorrow may never come.
2. The wise man suffers today so that he may enjoy a better tomorrow.

1. He who lives for today is sure of living.
2. He who lives for today may starve tomorrow.

1. When everything is said and done, a person is judged on the basis of what he has achieved.
2. When everything is said and done, a person is judged by whether he was a good, kind and religious individual.

1. Success is preferable to contentment.
2. Contentment is preferable to success.

1. Livelihood is predetermined.
2. The poor man is responsible for his own poverty.

1. We propose and Allah disposes.
2. The man should trust Allah and work hard to improve his situation.
2nd. The following statements relate to your traditions and customs. Please indicate if you strongly disagree (SD), disagree (D), agree (A), or strongly agree (SA) with the following proverbs by circling the appropriate letters that reflect your opinion in front of each proverb. Make sure that you circle only one option.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Most things in life are either black or white with little in-between.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>2. It is difficult to respect a man who does not wear a thoub (robe) and ghutra (head scarf).</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>3. I would rather die, than allow people to gossip about me.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>4. &quot;If you were not a wolf, other wolves would eat you.&quot;</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>5. I am accustomed to relying on my parents for important decisions.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>6. The mistakes of the past are preferable to the uncertainty of the future.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>7. My brother and me against my cousin; and my cousin and me against the stranger.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>8. Man determines his own future.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>9. It is more honorable to live on welfare than to take a job without dignity.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>10. Me before others.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>11. People are either for you or against you.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>12. All one has to do is to work hard to succeed in life.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>13. If a man fail, he can only blame himself.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td>14. Eat whatever you like, but wear whatever people desire.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
</tr>
</tbody>
</table>
15. It is easier to be afflicted by the malfunctioning of our bodies than suffer from shame.

16. I would take any job that would enable me to have a nice house in the city, even if it required a low prestige job.

17. Most people are inclined to look out for themselves.

18. I feel a direct obligation to follow on my parent’s wishes.

19. If you need any thing from a dog call him ‘sir’.

20. Though your kinsmen may chew you, they will not swallow you.

21. If you can not break a hand, kiss it and pray that somehow it breaks.
PART II

1st. The following statements are related to your perceptions of vocations. Choose only one statement from each pair. For example, in the first pair there are 1 and 2, read both 1 and 2 and circle the one that appeals most to you.

1. A high paying job with low prestige.
2. A low paying job that would have the respect of my friends and relatives.

1. A high paying job that would require me to spend a long period of time in school.
2. A moderately paying job that would allow me to get to work immediately.

1. A dirty, uncomfortable job that paid well.
2. A moderately paying job that provided a pleasing work environment.

1. A high paying job with low prestige.
2. An adequate welfare payment from the government.

1. A high paying job away from my family and friends.
2. A moderate paying job near my family and friends.

1. To work for a stranger at a high salary.
2. To work for a relative for a moderate salary.

1. A high paying job in the rural area.
2. An adequate paying job in (major city).

1. A high paying job away from my parents and relatives.
2. An adequate paying job nears my parents and relatives.

1. A very high salary with a high level of risk and worry.
2. An adequate paying salary with few risks and worries.

1. A position with high authority and responsibility in the rural areas.
2. A position with moderate authority and responsibility in a major city.

1. A position with high authority and responsibility away from my parents and friends.
2. A position with moderate authority and responsibility near my parents and friends.
2nd. This section is about your, and people around you, attitudes toward vocational-technical education. Please answer each question. Pay attention to each question and answer it according to its directions.

1. Why did you choose vocational-technical education? Indicate, by circling the letter(s), if you strongly disagree (SD), disagree (D), agree (A), or strongly agree (SA). If the reason mentioned in the list below is not applicable to your situation circle the letter N.

<table>
<thead>
<tr>
<th>Reason</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. High paying jobs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Vocational work admiration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Future of my country</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. It was the only choice I have</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I like hands-on jobs and training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. My father preference</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. My friends enrollment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. My teacher advice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Rapid promotion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Government subsidy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Easy education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Shorter programs than colleges</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. How do the people around you feel about vocational-technical education? (Please circle the appropriate letters: Strongly support it (SS), support it (S), did not support it (DS) and strongly did not support it (SDS).

<table>
<thead>
<tr>
<th>People</th>
<th>SS</th>
<th>S</th>
<th>DS</th>
<th>SDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. 1. High school teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. 2. Parents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. 3. Friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PART III

In this part, we will know some basic information about you. So, please reply to each question.

1. Age: ________ years.

2. What was the size of your geographical location in terms of population? (Check the box that represents the population of your birthplace)
   - Urban
   - Suburban
   - Rural

3. What is (was) your parent’s major occupation and where? Please place a check mark beside the occupation that represents your parents. Make sure you check which parent, father or mother.

   Vocational  Father  Mother
   Non-vocational       _____         _____
   Government           _____         _____
   Non-government       _____         _____
   None of the above    _____         _____

4. What is your family income level? (check the box that most accurately represents your family annual income)
   - 50,000 or more
   - 30,000 – 49,999
   - 20,000 – 29,999
   - 10,000 – 19,999
   - Less than 10,000
5. Check below the highest amount of formal education received by your mother and father.

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Father</th>
<th>Mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can't read or write (illiterate)</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Elementary</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Less than high school</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>High school graduate</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Graduate Degree</td>
<td>______</td>
<td>______</td>
</tr>
</tbody>
</table>

6. What type of high school did you attend?

a. General ______
b. Technical ______
PANEL OF EXPERTS

Member                                      Position

Dr. Gayl Ray                                 The Ohio State University
                                              Center for Education & Training
                                              for Employment

Dr. Janet Henderson                          Associate Professor
                                              The Ohio State University
                                              Department of Human &
                                              Community Resource
                                              Development (College of Food,
                                              Agric, & Environ Science)

Dr. Abdulrahman Almogrin                    Associate Professor
                                              King Saud University
                                              Department of Educational
                                              Policies (College of Education)

Dr. Abdulrahman Al Manea                     Associate Professor
                                              King Saud University
                                              Department of Arabic Language
                                              Teaching (College of Education)

Fawziah Alandas                              Lecturer (Arabic Language)
                                              Female Education Organization
                                              Arabic Language Department
                                              (College of Education)
APPENDIX C

COVER LETTER TO SAUDI TECHNICAL COLLEGES

LETTER FROM THE TECHNICAL COLLEGES CHAIRMAN TO SAUDI TECHNICAL COLLEGES DEANS TO INTRODUCE THE STUDY
I would like to inform you that Mr. Saleh Alandas, who is doing his Ph.D. in vocational-technical education, would conduct his research in the field of the attitude of freshmen in technical colleges toward vocational-technical education. The researcher will perform his study on all Saudi technical colleges with a sample of the first year students. Therefore, it is needed from each college to nominate a person to coordinate with him in this matter. Due to the fact that such studies are very important in determining the main reasons for students who graduated from high schools to enroll in the technical colleges and such research study will give the vocational education policy makers the ability to recognize factors that may influence student to prefer vocational education on other alternative, I ask all of you to support Mr. Alandas in his research and facilitate this study to be completed as soon as possible. For further information, you can contact the researcher at the college of Telecommunication (Riyadh).

Thanks,

The Chair of the Technical colleges Board

Dr. Saeed Malla
APPENDIX D

COVER LETTER TO FRESHMEN AT SAUDI TECHNICAL COLLEGES
Dear Participants,

This Ph.D. research study is being conducted by Saleh Alandas and supervised by Dr. Anthony Olinzock from the Ohio State University in Columbus, Ohio. The purpose of this study is to investigate the attitudes of freshmen in the Technical colleges toward Vocational-technical education. The information provided will be used to help to improve vocational-technical education in Saudi Arabia. The General Organization of Technical Education and Vocational Training needs your input to improve and maintain good programs that attract more and more Saudis to vocational-technical education and improve the country’s workforce needs.

Your answer to every question is very important. Please carefully read each question and respond to it to the best of your knowledge and feelings. If you need any assistance, you can seek the help from your teacher who gave you the questionnaire. To assure confidentiality, do not write your name on any part of the questionnaire.

By completing this questionnaire, you consent to participate in this study. However, you have the right to withdraw from this study any time you want. If you feel for any reason that you are not comfortable participating in this study, stop completing the questionnaire, inform your teacher, and return the questionnaire back to him.

We appreciate your participation and thank you for your cooperation.

Saleh Alandas
Ph.D. candidate,
The Ohio State University

Dr. Anthony Olinzock
Associate Professor
Workforce Education & Lifelong Learning
APPENDIX E

SECOND LETTER TO SAUDI TECHNICAL COLLEGES
Dear Technical College Dean

A couple of weeks ago, your college received a few questionnaires entitled (Attitudes of Freshmen in Saudi Technical colleges toward Vocational-Technical Education). As of today, we have not received some of your students’ responses. If you already sent the responses, please accept our sincere thanks. If your students did not finish the surveys yet, would you please direct them to complete and return the questionnaire to the Telecommunication College as soon as possible. Students from your institution responses are critical in identifying their attitudes toward vocational-technical education (Technical colleges). Your help in this study is highly appreciated.

Thank you,

Riyadh Telecom College Dean

Mohammed Alowaid, Ph.D.
APPENDIX F

FINAL LETTER TO SAUDI TECHNICAL COLLEGES
Dear Technical College Dean

Thank you for your cooperation in regard to Saleh Alandas's research conductions. However, and for some reason, some of the study participants did not submit their questionnaires yet. Those who did not respond yet are very significant elements in the study and their participation is very valuable. Therefore, you will find attached to this letter a list of those students who did not complete the study instrument and a new copy of the instrument. I hope you will pass it to those students and ask them to fill it out as soon as possible and send it back to us.

Thanks,

Riyadh Telecom College Dean

Mohammed Alowaid, Ph.D.