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The Demand for Industrial Technology and Technology Education Faculty Professors at United States Universities

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**THE DEMAND FOR
INDUSTRIAL TECHNOLOGY AND TECHNOLOGY EDUCATION
FACULTY PROFESSORS AT UNITED STATES
UNIVERSITIES**

**A RESEARCH PROJECT PRESENTED TO THE GRADUATE FACULTY OF
THE DEPARTMENT OF OCCUPATIONAL AND TECHNICAL STUDIES
AT OLD DOMINION UNIVERSITY**

**IN PARTIAL FULFILLMENT
OF THE MASTER OF SCIENCE DEGREE**

**BY
CLEO HICKS JR
AUGUST 2005**

APPROVAL PAGE

This research paper was prepared by Cleo Hicks Jr. under the direction of Dr. John M. Ritz in OTED 636, Problems in Occupational and Technical Studies. It was submitted to the Graduate Program Director as partial fulfillment for the Degree of Master of Science with a concentration of Technology Education.

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CHAPTER I

Introduction

Universities prepare graduate students through doctoral programs to become university professors. The technical education fields of technology education and industrial technology require additional professors to fill new positions created by expanding student populations and by professors leaving because of retirements and career changes.

The profession of a university professor plays an important role to the education of students in technical fields. Faculty in Technology Education and Industrial Technology programs, in particular, encompass many specific traits and qualities that are needed for an individual to be successful. There are many requirements and qualifications needed in order to be considered for a faculty position. First, the primary roles of university professors are to teach undergraduate and graduate level courses to students in their department. Industrial Technology faculty members teach courses that enable students to become technological capable and develop supervisory/management skills. Technology Education faculty members teach courses related to technological literacy, including technology and society, technology assessment, technology foundation, plus various technical contents. In addition to teaching, faculty members must show the ability to publish and do research that must contribute to their educational communities and professions.

In a society that has become increasingly technology driven and dependent, there are many facets of technology that are taught. Technology educators also have an

enormous task of understanding new technologies and being able to teach others their responsibility to technology. These roles often call on an individual with a diverse background and knowledge with strong technical capabilities. For a doctoral student looking for a faculty position at a university, knowing what requirements and expertise in Industrial Technology and Technology Education would be helpful to them as they pursue their higher education degrees. All careers have requirements; however, the requirements of Industrial Technology and Technology Education faculty professor positions are the focus of this study. What does it take to be considered for a faculty professor position related to these subjects? It is the intent of this study to answer these questions and explore the traits desired.

Statement of the Problem

The problem of this study was to determine the demand for Industrial Technology and Technology Education faculty professor positions at United States universities.

Research Objectives

To guide this study, the following goals were developed:

1. Identify the positions available at the university level for professors of Technology Education and Industrial Technology.
2. Determine the demand of Industrial Technology faculty professor positions during the past five years, 2001-2005.
3. Determine the demand of Technology Education faculty professor positions during the past five years, 2001-2005.

4. Identify the different types of skills and requirements sought in these professions.
5. Determine the technical areas where the greatest need for faculty exists.

Background and Significance

The researcher, working as a graduate teaching assistant, has come in contact with many university professors at Old Dominion University that have sparked the interest of earning a doctoral degree. After earning a bachelors degree from Old Dominion University, the researcher has entertained the value and interest of teaching. The interest was sparked by many years of taking classes in the Information Technology Department at Old Dominion University. Many of the professors had a common passion and understanding for their courses, which left a lasting impact on the researcher.

Following the dream of teaching technology, the researcher started in the Occupational and Technical Studies (OTS) Department. Gaining experience teaching technology classes and a Microsoft Office class, the researcher learned that teaching at the university level was enjoyable. The faculty, in the OTS Department, has shown that learning and teaching never stop by explaining how ongoing research, publications, and innovations make their careers dynamic.

For students and doctoral students, this study will provide many answers that may be unclear. The significance of this study is that society needs Technology Departments to increase technological literacy in our society. It is important that society understands technology and knows how to apply it in their lives. This study will serve as a tool for other students to decide what pathways particular technologies required for employment. There is not enough information available to aid a person pursuing a faculty position in

Industrial Technology and Technology Education related to regional employment and technical skill specialty. Another significant use for this study is to properly prepare doctoral recipients with skills and experience needed to be considered for a faculty professor position.

Limitation

The following are limitations that were used throughout this study:

1. The study was limited to universities in the United States.
2. The study population was limited to those universities searching to fill faculty positions.
3. The study was limited to departments seeking Industrial Technology and Technology Education faculty members.
4. The data in the study were limited from the fall 2001 semester to the fall 2005 semester.
5. The data used is limited to those universities sending position announcements to the Department of Occupational and Technical Studies at Old Dominion University.

Assumptions

This study was based upon the following assumptions:

1. Universities in the United States that were looking to fill faculty professor positions for Industrial Technology and Technical Education sent out requests

in order to advertise their vacancies. These requests were either mailed or emailed.

2. There currently was not an available tool for measuring the demand of faculty professor positions at these universities who have Industrial Technology and Technology Education programs.
3. The universities included in the population did not change by eliminating the programs.
4. Students or possible candidates do not know what technical and pedagogical skills are required to become an Industrial Technology or Technology Education faculty professor.
5. Current Industrial Technology and Technology Education professors do leave one university to go to another university to seek better employment conditions and benefits.
6. Most successful candidates that are hired are trying to attain a tenured position in the department.
7. There are greater demands for some technological skills than in other areas, i.e., electronics/computers technologies, manufacturing, construction, etc.

Procedures

This study was performed by collecting data from universities around the United States. Most of the universities sent information through e-mail or carrier mail. The data were collected and sorted to determine skills and requirements needed to fill the vacancies of Industrial Technology and Technology Education faculty professor

positions. Throughout spring 2005 and summer 2005 semester at Old Dominion University, the researcher compiled information about universities in the population. Examining the data and analyzing the different positions and competencies the researcher will discuss the importance of the Industrial Technology and Technology Education professor and the demand of the faculty professor positions.

Definition of Terms

The following was a list of key terms to aid the understanding of the study:

Assistant professor - a member of a college or university faculty ranking typically above an instructor and below an associate professor; tenure track required teaching, research, and scholarship skills.

Associate professor - a member of a college or university faculty ranking typically above an assistant professor and below a professor; tenure track required teaching, research and scholarship skills.

Demand - the need from universities in the United States to fill the vacancies in their Industrial Technology and Technology Education programs.

Faculty professor position - the teaching staff of a particular faculty in a university or college.

Industrial Technology - is a field of study designed to prepare technical and/or management oriented professionals for employment in business, industry, education, and government, which will primarily involve the management, operation, and maintenance of complex technological systems.

Instructor - is the title given to university teachers that are below a professorial rank.

Lecturer - is the title given to university teachers that do not hold a professorship.

Primary responsibility is teaching and service, not research.

Technology Education - is the study of technology and its effects on individuals, society, and civilization that prepares teachers.

Technology - is the systematic application of knowledge, materials, tools, and skills to extend human capabilities.

Technical specialization - a specific technical skill or function such as drafting, graphic communication, construction technology, etc.

Tenure- professors are granted the right not to be fired without cause after an initial probationary period.

Tenure-track - a professor hired in a tenure-eligible position will work for approximately five years before a formal decision is made on whether tenure will be granted.

Visiting Professor - a professor visiting another college or university to teach for a limited time.

Overview of Chapters

Chapter I defines the overall goal of this research. This research is intended to find out how much of a demand there is for Industrial Technology and Technology Education faculty professor positions in universities of the United States. Chapter I of this study explained the background and significance of the problem. The researcher also included certain limitations and assumptions that must be understood before analyzing the worth of this study.

Chapter II is a review of literature, which will show the concepts described in the problem. Within this section will be literature on university faculty availability, and

specific information on the career qualifications for Industrial Technology and Technology Education. Chapter III will provide the methods and procedures used during the research process. Chapter IV will provide detail of the findings of this research. Finally, Chapter V will provide a summary, conclusion, and further recommendations of the study.

CHAPTER II

Review of Literature

The goal of this study was to determine the demand for faculty positions in Industrial Technology and Technology Education at the university level. The researcher gathered vacant faculty position announcements from the Industrial Technology and Technology Education faculty from Old Dominion University. These were collected by faculty and were stored in the department's administrative offices. Using this information, the researcher analyzed the data about the demand for faculty positions. Chapter II will discuss the definition of Industrial Technology and Technology Education. It will then review faculty positions available in Industrial Technology and Technology Education programs. The methods of determining the demand of Technology Education faculty positions will be explained. The demand for Industrial Technology faculty positions will also be explained. The last topic covered in this chapter will be the skills and requirements needed to be considered for a faculty position in both Industrial Technology and Technology Education.

Industrial Technology

Industrial Technology is a field, which relates to the technological and managerial skills that are needed in industry. Courses in Industrial Technology are established on the foundations of materials and processes, electronics, design, and a variety of technology courses such as construction and management. The study of Industrial Technology prepares professionals to lead careers in technical and/or management for employment in business, industry, education, and government. In order to teach these skills an individual must have expertise and experience in these technical areas.

Technology Education

Technology Education is a field of study that prepares people to become teachers in different levels of education. They teach technological literacy, nature of technology, technical illustration, electronics, communication technology, construction, manufacturing, and other related technologies. Faculty members teaching these skills should demonstrate expertise and mastery of a technical specialization within the Technology Education realm. Teaching students to teach others is another role of a Technology Education professor, including laboratory management, curriculum development, and teaching methodologies.

Industrial Technology Faculty Positions

In universities there are department chairs, and/or program coordinators, and faculty. Professors, Associate Professors, Assistant Professors, Lecturers, and Instructors are the titles earned by academic faculty who serve a university department. Within the Industrial Technology departments there are different technical disciplines. These disciplines are classified pertaining to the content required to teach. The following list includes technical specialties within Industrial Technology: Communication Technology, Construction Technology, Aerospace Technology, Automotive Technology, Electronics, Graphic Communication, Energy and Power, and Manufacturing Technology. Communication Technology involves skills in graphic design, photography, and telecommunications. Construction Technology explores civil engineering, construction management, project management, and materials and methods used in construction. Within Graphic Communication the focus remains on effective graphic and image design using different medias of communication. Energy and Power deals with different

industrial issues associated with types of energy systems and power. Drafting and Design encompasses the study of product design, architecture, and computer aided design (CAD). Manufacturing Technology specialties offer courses dealing with, but not limited to, materials and processes, industrial production analysis, and plant layout. Electronics offers courses related to automation, robotics, electricity, power and its applications. Aerospace Technology involves, at the least, avionics, aerodynamics, flight mechanics, and fluid dynamics. Automotive Technology involves the preparing learners to service and maintain automobiles. These studies examine the most common technical disciplines at the 62 Industrial Technology programs offered in U.S. universities; however there are many more disciplines not mentioned (Zargari, 1999, p. 2).

Technology Education Faculty Positions

Within Technology Education programs at most universities the faculty infrastructure is similar to those of Industrial Technology programs. Technology Education programs strive to achieve technological literacy and to prepare students to teach technology to students in school setting. Depending on the program and university, the faculty positions may be related to course content. Communication Technology, Transportation Technology, Production Technology, and Technology Education are often specialties for associate and assistant professor faculty positions in the field of Technology Education.

Several factors will affect the demand for Technology Education faculty positions. One key factor is if the state that the university teaches Technology Education is in need of Technology teachers in their public schools. The demand could change based on federal funding, population increases/decreases, or support for Technology

Education. The inability of a school system to enhance and maintain their Technology Education program will dramatically change the demand of Technology Education teachers.

Measuring the Demand of Industrial Technology Faculty Positions

The demand of Industrial Technology faculty positions will be measured in terms of how many different positions were sought by the participating universities. The researcher gathered all information given by other universities to tabulate the demand of Industrial Technology faculty positions. Zargari (1999) concluded in his research that 80% of recruiting methods for Industrial Technology faculty positions are through advertisements (p. 4). Examining the data and organizing the data into matrices will display the different Industrial Technology faculty positions for each university. The information has been collected for the past five years to have enough data to measure the demand. The information about the vacant faculty positions will be divided into each year. At this point it is important to recognize factors that may affect the demand for Industrial Technology faculty positions. In some states Industrial Technology needs are higher than other states. Zargari also stated that Industrial Technology programs will have to fill the vacancies of 70 faculty positions in less than five years because of retirements and program growth (2003, p. 5). Another factor that may affect demand is a spur or drought in the construction industry. With any change in the manufacturing or construction industry, there will be an increase of interest in the majors of Industrial Technology.

Measuring the Demand of Technology Education Faculty Positions

The goal of Technology Education faculty is to prepare students to be able to teach in secondary schools. The demand for Technology Education depends on the demand of students selecting this subject in secondary schools. To meet the demand by the students, universities will expand their programs to teach them.

The demand of Technology Education faculty positions sought by universities will depend on many factors similar to those of Industrial Technology. The researcher measured the demand based on the amount of information submitted to Old Dominion University by other universities seeking possible candidates to fill their vacancies. The information will be separated into the type of faculty position in Technology Education. Again, matrices will define the title of the faculty position by each university. Also, the positions will be divided into each individual year. The information spans the past five years, so there will be enough data to accurately measure change and demand.

Several factors will affect the demand of Technology Education faculty positions. One key factor is if the state that the university teaches Technology Education is in need of Technology teachers in their public schools. The demand could change based on funding or support for Technology Education. The inability of a school system to enhance and maintain their Technology Education program will dramatically decrease the demand of Technology Education teachers.

Skills and Requirements Sought for Vacant Faculty Positions

For many of the faculty positions available at the university level there was a certain subset of attributes that each required in order to fill these vacancies. Most of the

advertising letters sent to Old Dominion University were organized into three sections. Those sections are position, qualifications, and responsibilities.

The position in each document usually described the position that was sought by the university. Full time, tenure track Assistant or Associate Professor for Graphic Communication and Digital Imagery, beginning August 2005 is an example. Another example is Technology Education, Assistant or Associate Professor, Tenure Track Position, Industrial Technology Education Department, Academic Appointment (9 months). This statement was found in a position announcement from Indiana State University searching for a Technology Education Professor. The section of qualifications usually follows.

Qualifications describe what education and experience is needed to qualify to be an acceptable candidate for the position. A related Master's degree in Technology plus relative professional experience is a baseline quality for applying. Universities prefer that the candidate have an earned doctorate in a related Technology field. In this section the university lists certain qualities needed. An example for a Computer Aided Design and Graphic Design faculty position is experience in teaching solid modeling, animation and simulation, finite element analysis, rapid prototyping, computer imaging and digital photography skills are desired. Other requirements are industry experiences and holding professional licenses and certifications. Skills sought are the ability to demonstrate expertise in teaching, scholarship, and raising funds. Some universities also require two to five years of combined professional and teaching experience. The requirement of the qualifications depends on the title of the faculty position. If the position is for an Associate or Assistant Professor in Construction Management, the qualifications may

include capabilities of teaching the history of construction, site construction, and construction finance. Another example is the position of Director of Technology. This position required that the candidate have a strong record of published scholarship, undergraduate and graduate teaching, and familiarity of college technology programs.

Responsibilities describe what is expected from the faculty member when hired. The responsibilities of a Technology Education Professor include teaching undergraduate and graduate level courses in Technology Education. Some of these classes may be web based, laboratory based, on campus, or in a distance learning setting. Besides teaching courses, professors are expected to serve as advisors and mentors to students. In order to keep university courses relative, faculty members are expected to seek new knowledge and update the content of courses. Serving as a role model for students, professors are required to participate or sponsor technology related organizations and campus committees. Also, faculty members are required to maintain office hours. Another essential job of faculty members in a university setting is the ability to work with each other productively. Building strong community relations is a responsibility of faculty members along with raising external funds for the department. The ability to raise funds for the department is essential for maintaining the department's equipment and technology. Patrick supports the requirement that research is a primary function of a university professor (2001, p. 2). Research will keep course content relevant and effective for the learning of Industrial Technology students.

Summary

Many faculty positions make up an Industrial Technology and Technology Education program. This research study showed the numerous faculty positions available

in the universities. The researcher will depend on the information submitted to Old Dominion University about vacant faculty positions from other universities to determine the demand. The demand, which can be separated into two parts, will be measured for the types of faculty positions available and the amount of faculty positions sought. The information submitted by the universities seeking candidates to fill their vacancies was used to determine the skills and requirements needed. There currently is not enough information related to this study to compare data. This study will help contribute to the fields of Technology in providing a baseline document for doctoral students. Chapter III will introduce the methods and procedures of collecting data, including the population used for the study, the instrument design, and statistical analysis used to assess the collected data.

CHAPTER III

Methods and Procedures

This chapter provides information on how the data will be collected. Information about the population will be explored. Also, in this chapter the researcher will explain the methods of data collection and instrument design used to collect the information. To conclude the chapter, a statistical analysis and a summary will be provided.

Population

The population for this study was limited to the university departments who sent position announcements to faculty in the Department of Occupational and Technical Studies at Old Dominion University. These announcements sought candidates for positions in Industrial Technology and Technology Education. There currently are 156 institutions in the United States that have Industrial Technology and Technology Education programs that could have sent information (Schmidt, 2004). The universities sent position flyers to the department by mail or electronically to the faculty member's email. The population was limited to universities in the United States. Participating universities must have a program related to the fields of Industrial Technology or Technology Education.

Instrument Design

In order to measure the demand for faculty positions at universities, a database was constructed for each university in relation to the different faculty positions sought. The universities were organized according to year starting with 2001. From each year, each university was accounted for by submitting a flyer or email seeking faculty

positions. Each faculty position sought was measured according to technical specialization. An example was having two Graphic Communication faculty positions needed for Old Dominion University in 2001. Tables were constructed to display the information for each school according to position and year. Each faculty position was also separated in their own specialty to measure the different type of faculty positions sought throughout the past five years.

Methods of Data Collection

Each faculty position accounted for in the study was submitted to Old Dominion University as part of their position advertising. The methods of delivery were limited to email and regular carrier mail. The requirements for accepting the position announcements into the study were that the positions were advertised for Industrial Technology or Technology Education related faculty positions. Also, the universities seeking faculty positions must be in the United States. The information was collected from the past five years to measure the demand relative to this time period.

Statistical Analysis

Information sent to the offices of the Industrial Technology and Technology Education faculty members was tabulated and analyzed in order to make sure all the objectives of the study were met. Each flyer or position announcement was checked if there was a valid faculty position advertised for Industrial Technology or Technology Education. A matrix of nominal data was created to measure the number and frequency of each type of faculty position sought by universities.

Summary

Chapter III discussed the population used to garner information for this study. Next the researcher explored the instrument design used to analyze the information. Following the instrument design section the methods of data collection were explained to show how the researcher compiled information about the universities and vacant faculty positions in Industrial Technology and Technology Education. Then the researcher explained how the data was analyzed. Chapter IV will provide tables describing the collected data from the past five years. Additionally, the researcher will show the demand of university faculty based on the information collected.

Chapter IV

Findings

This study examined the demand of Industrial Technology and Technology Education faculty professor positions at United States universities during the past five years. The research was guided by five objectives:

1. Identify the positions available at the university level for professors of Industrial Technology and Technology Education.
2. Determine the demand of Industrial Technology faculty professor positions during the past five years, 2001-2005.
3. Determine the demand of Technology Education faculty professor positions during the past five years, 2001-2005.
4. Identify the different types of skills and requirements sought in these professions.
5. Determine the technical areas where the greatest need for faculty exists.

This chapter will discuss the findings examined in the position announcements.

The position announcements were examined and reviewed to answer each research objective. Each position announcement included detailed qualifications, requirements, skills, and positions sought. Included in this chapter are sections, listed according to research goals, that presents all the collected data and provides a statistical comparison using the sample total from each year for the study's problem.

Faculty Positions for Industrial Technology and Technology Education

The first goal of the study was to identify the faculty positions available for Industrial Technology and Technology Education. In order to organize the data collected for each year, Table 1 was constructed with four columns. The name of the university is

on the first column. The second column lists the type of position sought by the university. The third column lists the type of appointment or yearly contract the university is seeking. The fourth column lists the technical specification or concentration of courses that the university is seeking to fill. Tables 2, 3, 4, and 5 represent data collected from the past five years, from 2001 and ending July 1, 2005. There were 40 total positions in 2001. The amount of each type of faculty positions for 2001 was 15 for Assistant and/or Associate Professor, 16 for Assistant Professor, two for Associate Professor, two for Full Professor, one for Chair or Department Head, one for Lecturer, one for Instructor, and one for Instructor and or Assistant and Associate Professor. Table 1 displays these findings.

Table 1: Universities Seeking Faculty Positions in the Year of 2001

University	Positions	Appointment Conditions	Technology Specification
Appalachian State University	Assistant Professor	Tenure Track and Full Time	Industrial Drafting and Design
Bowling Green State University	Assistant Professor	Tenure Track and Full Time	Industrial Technology
California State University, Long Beach	Assistant/Associate Professor	Tenure Track and Full Time	Occupational and Adult Teacher Education program
California State University, Long Beach	Assistant/Associate Professor	Tenure Track and Full Time	Foundation of Occupational Education and Research Methodology
California University of Penn	Student Teaching/Instructor	Tenure Track and Full Time	Technology Education
Clemson University	Assistant Professor	Tenure Track and Full Time	Technology Education
Eastern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Computer Electronic Technology
Eastern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Industrial Technology
Eastern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Computer Electronics and Industrial Technology
Eastern Illinois University	Assistant Professor	Tenure Track and Full Time	Manufacturing Management Technology

Eastern Michigan University	Department Head	Tenure Track and Full Time	Industrial Technology
Fort Hays State University	Assistant Professor	Tenure Track and Full Time	Manufacturing Technology
Illinois State University	Assistant Professor	Tenure Track and Full Time	Printing Management and Imaging Technology
Illinois State University	Associate/Full Professor	Tenure Track and Full Time	Industrial Technology
Indiana State University	Assistant/Associate Professor	Tenure Track and Full Time	Career and Technical Education and Technology Education
Indiana State University	Assistant/Associate Professor	Tenure Track and Full Time	Technology Education
Iowa State University	Assistant/Associate Professor	Tenure Track and Full Time	Manufacturing Technology/Automation
Iowa State University	Assistant/Associate Professor	Tenure Track and Full Time	Industrial Education and Technology
Kean University	Assistant/Associate Professor	Tenure Track and Full Time	Telecommunications and Information Technology
Kean University	Assistant/Associate Professor	Tenure Track and Full Time	Computer Integrated Design and Manufacturing
Millersville University	Assistant Professor	Tenure Track and Full Time	Manufacturing Technology
North Carolina Agricultural and Technical State	Associate Professor	Tenure Track and Full Time	Manufacturing Technology
North Carolina Agricultural and Technical State	Associate Professor	Tenure Track and Full Time	Graphic Communication Systems and Technical Studies
University of Northern Iowa	Assistant/Associate Professor	Tenure Track and Full Time	Electro-Mechanical Systems
University of Northern Iowa	Assistant/Associate Professor	Tenure Track and Full Time	Technology Education/Graphic Communication
Northern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Construction Management
Northern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Technology Management
Ohio Northern University	Assistant Professor	Tenure Track and Full Time	Manufacturing Technology
Ohio Northern University	Assistant Professor	Tenure Track and Full Time	Technology Education

Ohio University	Assistant Professor	Tenure Track and Full Time	Computer Integrated Manufacturing Technology
Oklahoma State University	Associate/Full Professor	Tenure Track and Full Time	Technology Education
Oswego State University	Assistant Professor	Tenure Track and Full Time	Manufacturing and Material Processing
Oswego State University	Assistant Professor	Tenure Track and Full Time	Energy and Material Processing
Purdue University	Assistant Professor	Tenure Track and Full Time	Industrial Technology
Purdue University	Assistant Professor	Tenure Track and Full Time	Industrial Technology distribution
Southeast Missouri State University	Instructor, Assistant, Associate Professor	Tenure Track and Full Time	Manufacturing Technology
Southeast Missouri State University	Instructor, Assistant, Associate Professor	Tenure Track and Full Time	CAD/Drafting
Southeast Missouri State University	Instructor, Assistant, Associate Professor	Tenure Track and Full Time	Technical Communications and Science Technology and Society
University of Wisconsin Platteville	Assistant Professor	Tenure Track and Full Time	Communication Technology
University of Wisconsin Platteville	Assistant Professor	Tenure Track and Full Time	Industrial Technology Management/Building Construction Management

In 2002 there were a total of 42 positions counted. The majority of those positions were for Assistant and/or Associate Professor and Assistant Professor totaling 15 and 17 respectively. The amount of the other types of faculty positions for 2002 were one for Associate Professor, one for Full Professor, four for Chair or Head, one for Lecturer, one for Instructor, and two for Instructor and/or Assistant and Associate Professor. Table 2 displays detailed findings about the year 2002.

Table 2: Universities Seeking Faculty Positions in the Year of 2002

University	Positions	Appointment Conditions	Technology Specification
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	Technical Photography
Ball State University	Assistant Professor	Tenure Track and Full Time	Computer and Electrical Engineering Technology
Bemidji State University	Assistant Professor	Tenure Track and Full Time	Construction Technology
Bemidji State University	Assistant Professor	Tenure Track and Full Time	Graphic Design and Web Design
Bemidji State University	Assistant Professor	Tenure Track and Full Time	Computer Aided Design and Technical Graphics
Bemidji State University	Assistant Professor	Tenure Track and Full Time	Computer Aided Manufacturing and Technical Graphics
Bowling Green University	Instructor, Assistant/Associate Professor	Non Tenure	Industrial Technology
California University of Penn	Student Teaching/Instructor	Tenure Track and Full Time	Technology Education
California State University LA	Assistant/Associate Professor	Tenure Track and Full Time	Manufacturing Technology
California State University Long Beach	Assistant/Associate Professor	Tenure Track and Full Time	Occupational and Adult Education teaching methods
East Carolina University	Lecturer	Full Time	Industrial Technology
Eastern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Computer Electronic Technology
Eastern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Industrial Technology
Eastern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Computer Electronics and Industrial Technology
Illinois State University	Assistant Professor	Tenure Track and Full Time	Project Management
Indiana State University	Assistant/Associate Professor	Tenure Track and Full Time	Human Resource Development
Indiana State University	Chairperson	Tenure Track and Full Time	Manufacturing Technology and Construction Technology

Indiana State University	Assistant Professor	Tenure Track and Full Time	Mechanical Technology
Indiana State University	Assistant Professor	Tenure Track and Full Time	Automotive Technology
Indiana State University	Assistant Professor	Tenure Track and Full Time	Aerospace Technology
Iowa State University	Assistant/Associate Professor	Tenure Track and Full Time	Automation, Robotics, Electronics, Fluid power
Kean University	Assistant/Associate Professor	Tenure Track and Full Time	Computer Integrated Design and Manufacturing
Millersville University	Assistant Professor	Tenure Track and Full Time	Manufacturing Technology
Millersville University	Assistant Professor	Tenure Track and Full Time	Design and Drafting Technology
Morehead State University	Chairperson	Tenure Track and Full Time	Industrial Technology
University of Northern Iowa	Assistant/Associate Professor	Tenure Track and Full Time	Electrical and Information Engineering Technology
University of Northern Iowa	Assistant/Associate Professor	Tenure Track and Full Time	Manufacturing Technology
Central Missouri State University	Assistant Professor	Tenure Track and Full Time	Computer Aided Drafting and Design
Central Missouri State University	Assistant Professor	Tenure Track and Full Time	Printing and Imaging Technology Management
Mississippi State University	Assistant Professor	Tenure Track and Full Time	Instructional Technology
Mississippi State University	Assistant Professor	Tenure Track and Full Time	Instructional Technology
Mississippi State University	Assistant Professor	Tenure Track and Full Time	Industrial Technology
University North Dakota	Assistant/Associate Professor	Tenure Track and Full Time	Graphic Design and Communication Technology
Ohio Northern University	Assistant Professor	Tenure Track and Full Time	Technology Education
North Carolina Agricultural and Technical State	Associate Professor	Tenure Track and Full Time	Graphics Communication System and Technical Studies
North Carolina Agricultural and Technical State	Full Professor	Tenure Track and Full Time	Electronics and Computer Technology
North Carolina Agricultural and Technical State	Chair	Tenure Track and Full Time	Manufacturing Systems Chair

North Carolina Agricultural and Technical State	Chair	Tenure Track and Full Time	Construction Management and Safety Chair
Southeast Missouri State University	Instructor, Assistant/Associate Professor	Tenure Track and Full Time	Electricity and Electronics
Western Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Process Engineering Specialist
Western Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Manufacturing Specialist
Western Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Architectural and Construction Management Specialist
Virginia Tech	Assistant Professor	Tenure Track and Full Time	Technology Education

In 2003 there was a lower total of 14 positions, as compared to the previous two years. The majority of those positions were for Assistant and/or Associate Professor and Assistant Professor totaling six and three respectively. The amount of the other types of faculty positions for 2003 were one for Associate Professor, two for Full Professor, one for Lecturer, one for Instructor and or Assistant and Associate Professor. Table 3 displays detailed findings about the year 2003.

Table 3: Universities Seeking Faculty Positions in the Year of 2003

University	Positions	Appointment Conditions	Technology Specification
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	Construction Technology
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	Technical Photography
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	CAD/Drafting
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	Graphic Arts and Imaging Technology
Illinois State University	Assistant Professor	Tenure Track and Full Time	Printing Management and Imaging Technologies
Illinois State University	Assistant Professor	Tenure Track and Full Time	Construction Management

Millersville University	Assistant Professor	Tenure Track and Full Time	Technology Education
North Carolina Agricultural and Technical State	Full Professor	Tenure Track and Full Time	Electronics and Computer Technology
North Carolina Agricultural and Technical State	Full Professor	Tenure Track and Full Time	Construction Management and Occupational Safety
North Carolina Agricultural and Technical State	Associate Professor	Tenure Track and Full Time	Graphics Communication System and Technical Studies
Northern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Technology Management
Southeast Missouri State University	Instructor, Assistant/Associate Professor	Tenure Track and Full Time	CAD/Drafting
University of Wisconsin Platteville	Lecturer	Tenure Track and Full Time	Industrial Technology, Management, Manufacturing, and Technology Management
Western Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Manufacturing Specialist

In 2004 there was an increase in the amount of positions sought by universities.

There were a total of 51 positions with a majority of them being for Assistant and/or Associate Professor and Assistant Professor totaling 21 and 19 respectively. The amount of the other types of faculty positions for 2004 were one for Associate Professor, two for Full Professor, one for Lecturer, three for Department Head or Chair, one for Instructor, two for Instructor and/or Assistant and Associate Professor, and two for Visiting Professor. Table 4 displays detailed findings about the year 2004.

Table 4: Universities Seeking Faculty Positions in the Year of 2004

University	Positions	Appointment Conditions	Technology Specification
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	Appropriate Technology
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	Industrial Design
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	Graphic Arts and Imaging Technology
Appalachian State University	Associate Professor/Full Professor	Tenure Track and Full Time	Industrial Technology
Arizona State University	Assistant/Associate Professor	Tenure Track and Full Time	Graphic Information Technology
Arizona State University	Assistant/Associate Professor	3 year contract	Graphic Information Technology
Black Hills State University	Assistant Professor	Tenure Track and Full Time	CAD
Ball State University	Assistant Professor	Tenure Track and Full Time	Manufacturing Engineering Technology
Ball State University	Assistant Professor	Tenure Track and Full Time	Industrial Technology
Ball State University	Assistant Professor	Tenure Track and Full Time	Graphic Arts Management
Bowling Green State University	Assistant Professor	Tenure Track and Full Time	Visual Communication Technology
Central Missouri State University	Assistant/Associate Professor	Tenure Track and Full Time	Graphic Imaging & Design Technology
East Carolina University	Assistant Professor	Tenure Track and Full Time	Industrial Technology
Eastern Illinois University	Assistant Professor	3 year contract	Technology Education
Eastern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Computer Electronics and Industrial Technology
Eastern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Industrial Technology
Eastern Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Construction Management
Eastern Michigan University	Assistant Professor	Tenure Track and Full Time	Electronics Engineering Technology
University of Houston	Assistant/Associate Professor	Tenure Track and Full Time	Organizational Leadership and Project Management

Illinois State University	Assistant Professor	Tenure Track and Full Time	Construction Management
Illinois State University	Assistant Professor	Tenure Track and Full Time	CAD/Integrated Manufacturing
Iowa State University	Assistant/Associate Professor	Tenure Track and Full Time	Industrial Technology
Iowa State University	Assistant/Associate Professor	Tenure Track and Full Time	Industrial Technology
Kean University	Assistant/Associate Professor	Tenure Track and Full Time	Computer Integrated Design & Manufacturing
Millersville University	Assistant Professor	Tenure Track and Full Time	Design, Innovation & Communication Technology
Millersville University	Assistant Professor	Tenure Track and Full Time	Production Technology
Morehead State University	Assistant Professor	Tenure Track and Full Time	Construction Management
Morehead State University	Associate Professor	Tenure Track and Full Time	Industrial Technology
Missouri Western State College	Assistant Professor	Tenure Track and Full Time	Construction Engineering Technology
New York City College of Technology	Assistant Professor	Tenure Track and Full Time	Technology Education
New York City College of Technology	Assistant Professor	Tenure Track and Full Time	Career and Technology Teacher Education
North Carolina Agricultural & Technical State	Full Professor	Tenure Track and Full Time	Construction Management and Occupational Safety
North Carolina Agricultural & Technical State	Full Professor/Chair	Tenure Track and Full Time	Graphics Communication Systems and Technical Studies
North Carolina Agricultural & Technical State	Assistant/Associate Professor	Tenure Track and Full Time	Graphics Communication Systems and Technical Studies
North Carolina Agricultural & Technical State	Assistant/Associate Professor	Tenure Track and Full Time	Manufacturing Systems
NC State University	Assistant/Associate Professor	Tenure Track and Full Time	Technology Education
University of Nebraska at Kearney	Assistant/Associate Professor	Tenure Track and Full Time	Industrial Distribution

Northern Kentucky University	Full Professor/Chair	Tenure Track and Full Time	Industrial Technology
Ohio State University	Visiting Assistant Professor	Non Tenure 2 year contract	Technology Education
Oklahoma State University	Assistant Professor	Tenure Track and Full Time	Career and Technical Education and Technology Education
Purdue University	Department Head	Tenure Track and Full Time	Computer Graphics Technology
Southeast Missouri State University	Instructor, Assistant/Associate Prof	Tenure Track and Full Time	Electronics and Computer Technology
Southeast Missouri State University	Instructor, Assistant/Associate Prof	Tenure Track and Full Time	Construction Management and Design
Southeast Missouri State University	Instructor	Non Tenure	Technical Graphics
Utah State University	Assistant/Associate Professor	Tenure Track and Full Time	Engineering and Technology Education
Western Carolina University	Assistant/Associate Professor	Tenure Track and Full Time	Construction Management
Western Illinois University	Assistant/Associate Professor	Tenure Track and Full Time	Graphic Communication
Western Illinois University	Assistant/Associate Professor	Tenure Track and Full Time	Construction Technology
University of Wisconsin Platteville	Assistant Professor	Tenure Track and Full Time	Industrial Technology Manufacturing Technology
University of Wisconsin Platteville	Assistant Professor	Tenure Track and Full Time	Industrial Technology Management/Building Construction Management
Virginia Tech	Visiting Assistant Professor	Tenure Track and Full Time	Technology Education

In 2005 there was an equal amount of positions sought by universities from 2004, which totaled to 51 positions, with a majority of them being for Assistant and/or Associate Professor and Assistant Professor totaling 25 and 22 respectively. The amounts of the types of faculty positions for 2005 were one for Full Professor, one for

Chair or Department Head, one for Instructor, and one for Visiting Professor. Table 5 displays detailed findings about the year 2005.

Table 5: Universities Seeking Faculty Positions in the Year of 2005

University	Positions	Appointment Conditions	Technology Specification
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	Furniture Studies
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	Construction Technology
Appalachian State University	Assistant/Associate Professor	Tenure Track and Full Time	Technology Education
California University of Penn	Student Teaching/Instructor	Tenure Track and Full Time	Technology Education
Cal Poly State University	Assistant Professor	Tenure Track and Full Time	Graphic Communication
Central Missouri State University	Assistant/Associate Professor	Tenure Track and Full Time	Graphic Imaging and Design Technology
Central Missouri State University	Assistant Professor	Tenure Track and Full Time	Printing and Imaging Technology Management
Central Missouri State University	Assistant Professor	Tenure Track and Full Time	Industrial Technology
Central Missouri State University	Assistant Professor	Tenure Track and Full Time	Electronics Technology
East Carolina University	Assistant Professor	Tenure Track and Full Time	Industrial Technology
East Carolina University	Assistant Professor	Tenure Track and Full Time	Manufacturing and Design
Eastern Illinois University	Assistant Professor	Tenure Track and Full Time	Manufacturing Management/Technology
Eastern Illinois University	Assistant Professor	Tenure Track and Full Time	Automation and Control
Fitchburg State College	Assistant Professor	Tenure Track and Full Time	Technology Education
Fitchburg State College	Assistant Professor	Tenure Track and Full Time	Industrial Technology
Fitchburg State College	Assistant Professor	Tenure Track and Full Time	Architecture
Georgia Southern University	Assistant Professor	Tenure Track and Full Time	Construction Management
Humboldt State University	Assistant Professor	Tenure Track and Full Time	Industrial Technology

Indiana State University	Assistant/Associate Professor	Tenure Track and Full Time	Technology Education
Millersville University	Assistant Professor	Tenure Track and Full Time	Graphic Communication and Digital Imaging
Montana State University	Assistant/Associate Professor	Tenure Track and Full Time	Technology Education
Morehead State University	Assistant Professor	Tenure Track and Full Time	CAD and Graphics
North Carolina Agriculture and Technical State	Assistant/Associate Professor	Tenure Track and Full Time	Graphics Communication Systems and Technical Studies
North Carolina Agriculture and Technical State	Assistant/Associate Professor	Tenure Track and Full Time	Electronics, Computer and Information Technology
North Carolina Agriculture and Technical State	Assistant/Associate Professor	Tenure Track and Full Time	Graphic Communication Systems and Occupational Safety and Health
North Carolina Agriculture and Technical State	Assistant/Associate Professor	Tenure Track and Full Time	Graphic Communication Systems (Integrated Internet Technologies)
North Carolina Agriculture and Technical State	Full Professor	Tenure Track and Full Time	Construction Management and Occupational Safety
NC State University	Assistant/Associate Professor	Tenure Track and Full Time	Technology Education
Northern Kentucky University	Full Professor/Chair	Tenure Track and Full Time	Industrial Technology
University of Nebraska at Kearney	Assistant/Associate Professor	Tenure Track and Full Time	CAD /Drafting
Ohio Northern University	Assistant/Visiting Professor	Tenure Track and Full Time	Robotics and Automation Systems
Pennsylvania College of Technology	Assistant/Associate Professor	Tenure Track and Full Time	Civil Engineering Technology
Pennsylvania College of Technology	Assistant/Associate Professor	Tenure Track and Full Time	Civil Engineering Technology
Pittsburgh State University	Assistant/Associate Professor	Tenure Track and Full Time	Human Resource Development
Purdue University at Calumet	Assistant/Associate Professor	Tenure Track and Full Time	Computer Graphics Technology
Purdue University at Calumet	Assistant/Associate Professor	Tenure Track and Full Time	Computer Graphics Technology

Purdue University	Assistant/Associate Professor	Tenure Track and Full Time	Technology Education
Purdue University at Richmond	Visiting Professor	Non Tenure and Full Time	Industrial Technology
Purdue University at Calumet	Assistant/Associate Professor	Tenure Track and Full Time	Computer Graphics Technology
Southern Illinois University	Assistant Professor	Tenure Track and Full Time	Electrical Engineering Technology
University of Southern Mississippi	Assistant Professor	Tenure Track and Full Time	Technology Education
University of Texas Permian Basin	Assistant Professor	Tenure Track and Full Time	Petroleum Technology
University of Texas Permian Basin	Assistant Professor	Tenure Track and Full Time	Manufacturing Technology
University of Texas at Tyler	Assistant Professor	Tenure Track and Full Time	Industrial Technology
Truckee Meadows Community College	Instructor	Tenure Track and Full Time	Manufacturing Technology
Western Carolina University	Assistant/Associate Professor	Tenure Track and Full Time	Construction Management
Western Illinois University	Assistant/Associate Professor	Tenure Track and Full Time	Graphic Communication/Graphic Arts
Western Illinois University	Assistant/Associate Professor	Tenure Track and Full Time	Construction Technology/Drafting
Western Kentucky University	Assistant/Associate Professor	Tenure Track and Full Time	Manufacturing Specialist
University of Wisconsin Platteville	Assistant Professor	Tenure Track and Full Time	Industrial Technology Manufacturing Technology
Virginia Tech	Assistant/Associate Professor	Tenure Track and Full Time	Technology Education
Youngstown State University	Assistant Professor	Tenure Track and Full Time	Electrical Engineering Technology
Youngstown State University	Assistant Professor	Tenure Track and Full Time	Drafting and Design Technology

Findings from 2001 to 2005 revealed an increase in total positions sought by United States universities. In years 2001 and 2002, 40 and 42 positions were sought. In the year of 2003 there were only 14 positions sought. The following two years recorded totals of 51 positions sought each year. The demand has increased for the total amount of

Industrial Technology and Technology Education professor positions from 2001 to 2005.

Table 6 summarizes the findings of the total positions sought.

Table 6: Total Positions Sought Each Year

Year	Total Positions
2001	40
2002	42
2003	14
2004	51
2005	51
Total	198

Professor Positions in Industrial Technology and Technology Education

From examining position announcements from 2001 to 2005, there were a variety of positions offered. There were lecturers, instructors, visiting professors, assistant professors, associate professors, full professor, and Department Head or Chairperson. University departments often combined advertisements for assistant or associate professors to fill their vacancies. These positions were classified together just as the position announcement stated. Some position announcements sought assistant professors. The reason for seeking assistant professors was to groom and develop younger faculty members to maintain a strong department identity and align with the qualifications for the position. The majority of the positions sought by participating universities were for assistant or associate professor. Table 7 separates each position in the first column and each year starting with 2001 in the following columns.

Table 7: Faculty Positions

Position Title	2001	2002	2003	2004	2005	Total
Assistant/Associate Professor	15	15	6	21	25	82
Assistant Professor	16	17	3	19	22	77
Associate Professor	2	1	1	1	0	5
Full Professor	2	1	2	2	1	8
Department Head/Chair	1	4	0	3	1	9
Lecturer	1	1	1	0	0	3
Instructor	1	1	0	1	1	4
Instructor, Associate or Assistant Professor	3	2	1	2	0	8
Visiting Professor	0	0	0	2	1	3
Totals	40	42	14	51	51	198

Demand for Industrial Technology Faculty Positions

The second goal of the study was to determine the demand for Industrial Technology faculty positions. The demand for Industrial Technology faculty positions has increased from 2001 to 2005. In 2001, universities sought 33 positions and in 2002 universities sought 40. In 2003 the number dropped drastically to 13 positions sought by universities. The following year, in 2004, universities sought 43 Industrial Technology positions. This number remained at this level in 2005 with 42 total positions tabulated. Table 8 shows the total positions sought for Industrial Technology. A total of 171 positions were sought during the past five years.

Table 8: Total Faculty Positions for Industrial Technology

Year	Total Positions
2001	33
2002	40
2003	13
2004	43
2005	42
Total	171

Demand of Technology Education Faculty Positions

The third research goal was to determine the demand for Technology Education faculty positions. The demand for Technology Education faculty positions has increased from 2001 to 2005. In 2001 there were only seven positions for Technology Education at universities. In the following year there were only two positions and in 2003 there was one position sought by universities. The demand fell for Technology Education until 2004 when universities sought eight positions. The following year in 2005, universities sought nine positions. A summary of these findings is shown in Table 9. A total of 27 positions were sought from 2001 to 2005.

Table 9: Total Faculty Positions for Technology Education

Year	Total Positions
2001	7
2002	2
2003	1
2004	8
2005	9
Total	27

Skills, Requirements, and Qualifications

The fourth goal of this study was to determine the skills, requirements, and qualifications sought by universities. Each department seeking quality candidates has criteria that must be met to fill the position. The most common requirements include an earned doctorate degree in a closely related field, teaching experience at the college level, training in United States industry, demonstrate the ability to raise funds, teach, and conduct research.

Technical Areas with Greatest Need for Faculty Positions

The fifth goal of this study was to determine the technical areas with the greatest need for faculty positions. Examining each position announcement, technical specialties were derived for each faculty position. The Industrial Technology field in general had the most need for faculty members from 2001 to 2005 with 36 positions. Manufacturing Technology was the second most sought technical area with 29 positions. Technology Education in general had a need for 27 positions from 2001 to 2005. Communication Technology and Construction Technology both had a need for 25 positions by universities from 2001 to 2005. Drafting and Design had a need for 17 positions by universities from 2001 to 2005. Computer Technology and Electrical Technology both had a need for 10 faculty positions from 2001 to 2005. Mechanical Technology had a total of four positions sought by universities. Energy and Power had a total of three positions needed by universities. Aerospace and Automotive Technology had the least amount of need for faculty with both needing one faculty positions from 2001 to 2005. Each year was categorized in Table 10 to summarize these findings.

Table 10: Technical Areas with Greater Need for Faculty

Technical Specialty	2001	2002	2003	2004	2005	Total
Aerospace Technology	0	1	0	0	0	1
Automotive Technology	0	1	0	0	0	1
Communication Technology	4	3	4	7	7	25
Computer Technology	1	1	1	3	4	10
Construction Technology	1	3	3	10	8	25
Drafting and Design	2	5	2	4	4	17
Electrical Technology Electronics	2	4	0	1	3	10
Energy and Power	1	1	0	0	1	3
Industrial Technology, General	10	12	2	13	9	36
Manufacturing Technology	11	8	1	5	4	29
Mechanical Technology	1	1	0	0	2	4
Technology Education, General	7	2	1	8	9	27
Total	40	42	14	51	51	198

Summary

The research goals of the study were focused on the demand for Industrial Technology and Technology Education faculty positions in the United States, 2001 to 2005. Throughout the study another research goal was to find the technical specialties in these fields with the greatest need. The researcher identified skills, requirements, and preferred qualifications sought by universities in the United States. Also, the researcher identified the positions available at the university level for professors of Industrial

Technology and Technology Education.

The next chapter will summarize the first four chapters of this study. It will summarize the research goals. This chapter will also address the conclusions that can be drawn from the data examined in the study. Lastly the researcher will make recommendations pertaining to the demand for Industrial Technology and Technology Education faculty positions.

Chapter V

Summary, Conclusions and Recommendations

This chapter includes a summary, conclusions, and recommendations for this study. The summary will review this research project. Conclusions will be drawn based on the research goals. Recommendations for future and further research will be made based upon the results of this study.

Summary

This study was conducted to determine the demand for Industrial Technology and Technology Education faculty professor positions at United States universities. In order to examine the demand, position announcements were maintained by the department of Occupational and Technical Studies at Old Dominion University. These position announcements were used to classify positions, requirements, qualifications, and technical specialties sought for each particular position.

Industrial Technology and Technology Education involves important degrees that professors all around the United States are using for teaching. These professors make up an integral part of contributing to their field of expertise by raising grants, challenging learners, and researching problems. It is important to provide understanding of what positions are available to doctoral students looking to attain a career as an Industrial Technology or Technology Education professor.

Conclusions

The goals of this study were to answer the following questions:

1. Identify the positions available at the university level for professors of Technology Education and Industrial Technology.

Research results indicate that there were numerous types of faculty positions. The following is a list of the faculty positions found: instructor, lecturer, visiting professor, assistant professor, associate professor, full professor, and Department Head/Chairperson. From 2001 to 2005, 82 of the total positions sought were for assistant and/or associate professor. From 2001 to 2005, 77 of the total positions sought were for assistant professor. Research results indicated that from 2001 to 2005, nine of the total positions sought were for Department Head or Chair. From 2001 to 2005 research results indicated that eight positions were sought for full professor and instructor and/or assistant professor and associate professor. From 2001 to 2005, research results indicated that five of the total positions sought were for associate professor. Research also indicated that from 2001 to 2005 that four positions were sought for instructor, and three positions were sought for lecturer and visiting professor. Table 11 summarizes these numbers.

Table 11: Faculty Positions

Position Title	2001	2002	2003	2004	2005	Total
Assistant/Associate Professor	15	15	6	21	25	82
Assistant Professor	16	17	3	19	22	77
Associate Professor	2	1	1	1	0	5
Full Professor	2	1	2	2	1	8
Department Head/Chair	1	4	0	3	1	9
Lecturer	1	1	1	0	0	3
Instructor	1	1	0	1	1	4
Instructor, Associate or Assistant Professor	3	2	1	2	0	8
Visiting Professor	0	0	0	2	1	3
Totals	40	42	14	51	51	198

2. Determine the demand of Industrial Technology faculty professor positions during the past five years; 2001-2005.

The demand of Industrial Technology faculty positions had increased from 2001 to 2005. In 2001 there were 33 out the 40 total Industrial Technology faculty positions sought by universities. In 2002, 40 out the 42 total positions were sought for Industrial Technology faculty positions. In 2003 the total number for Industrial Technology faculty positions sought decreased to 13. In 2004 the number of total Industrial Technology faculty positions increased to 43. The following year of 2005 recorded similar results with 42 total Industrial Technology faculty positions. Table 12 summarizes these findings by year starting with 2001 and ending with 2005.

Table 12: Demand for Industrial Technology Faculty Positions

Year	Total Positions
2001	33
2002	40
2003	13
2004	43
2005	42
Total	171

3. Determine the demand of Technology Education faculty professor positions during the past five years; 2001-2005.

Research results indicated that in 2001, universities sought seven Technology Education professor positions. In 2002 there was a decrease of total positions sought resulting in two positions. In 2003, one position was sought for Technology Education faculty. In 2004, the total number of Technology

Education faculty positions increased to eight. In 2005, the total number of positions increased to nine. Table 13 summarizes these numbers.

Table 13: Demand for Technology Education Faculty Positions

Year	Total Positions
2001	7
2002	2
2003	1
2004	8
2005	9
Total	27

4. Identify the different types of skills and requirements sought in these professions.

Research indicated that nearly all universities preferred candidates who have earned the relevant doctorate degree towards the position sought. Universities preferred that the candidates have college teaching experience. Most universities also preferred that the candidates possessed effective oral and written communication skills. Scholarship and fundraising were a few important characteristics sought from professors who would actively research and earn money for the department through grant writing. Other qualities that were preferred by universities were having United States industry experience.

5. Determine the technical areas where the greatest need for faculty existed.

The area where the greatest need for faculty existed was found to be the area of Industrial Technology in general. Universities sending position announcements from 2001 to 2005 sought 36 positions for the general area of Industrial Technology. The majority of the technical areas were in the specialists of Industrial Technology. The technical areas with the most need for faculty existed

in Manufacturing Technology with 29 total positions sought from 2001 to 2005.

Technology Education resulted in 27 total positions sought from 2001 to 2005.

Communication Technology and Construction Technology both resulted in 25 positions sought from 2001 to 2005. Drafting and Design resulted in 17 positions sought from 2001 to 2005.

Recommendations

The demand for Industrial Technology and Technology Education faculty professors will continue to increase as the economy of the United States strengthens. In 2003 there were fewer position announcements sent by universities. It was believed by the researcher that the consequences of the United States entering war in Iraq affected the economy and halted employment needs. Using this study it was possible to make numerous recommendations to doctoral students looking to become professors of Industrial Technology and Technology Education.

First, this study revealed what technical specialties have the greatest need. As a tool for doctoral students searching for a tenured professor position at United States universities would be insightful. Candidates will know what technical specialties are in demand. They also will know which universities will have the greatest needs. The majority of the positions sought were in the general Industrial Technology field. Within the Industrial Technology field there were many universities seeking to fill position in Drafting and Design, Communication Technology, and Manufacturing Technology.

Second, the study offered a perspective on what type of demand technical specialties have. The demand for faculty positions in Construction Technology has increased in the past five years. In 2001 there was only one position sought for

Construction Technology as compared to seven in the year 2004 and 2005. This could be based on economic recovery and development.

Third, the need for quality faculty existed in Industrial Technology and Technology Education. The researcher recommends that there needs to be more encouragement for students to become university professors in Industrial Technology and Technology Education. There is an obvious need of faculty programs that must be met in order for Industrial Technology and Technology Education programs to increase their size and contribute to the learning community.

Lastly, more research should be led to explain the importance of Technology in all fields of technical specialties. The information researched in this study should be used to promote positions that are open at universities. This study should also provide insight for doctoral students desiring to become university professors.

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