EMPLOYERS' ASSESSMENT OF THE GENERAL WORK SKILLS AND WORK ATTITUDES POSSESSED BY ELECTRICITY/ ELECTRONICS GRADUATES OF FEDERAL COLLEGE OF EDUCATION (TECHNICAL) BICHI, KANO STATE.

By

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DEPARTMENT OF VOCATIONAL TEACHER EDUCATION
(INDUSTRIAL TECHNICAL – ELECTRICAL/ELECTRONICS)
UNIVERSITY OF NIGERIA, NSUKKA

February, 2012

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A RESEARCH PROJECT PRESENTED TO THE DEPARTMENT OF VOCATIONAL TEACHER EDUCATION, UNIVERSITY OF NIGERIA, NSUKKA, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS DEGREE IN INDUSTRIAL TECHNICAL EDUCATION.

February, 2012

APPROVAL PAGE

This project has been approved for the Department of Vocational Teacher Education, University of Nigeria, Nsukka.

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DEDICATION

This thesis is dedicated to:

The ALMIGHTY GOD who enabled me to begin and end of this work;

my eldest brother, Engr. Attamah Augustine Aniegbunam of the evergreen blessed memory, a Light Bearer, Peace Magnet and Inspirator,

my wife, Mrs Osayemwenre Valentine Attamah, an epitome of Love, Godsô-conscious rare gem;

my children, Chukwunonyerem, Akachukwu, Soomtoochukwu & Chetachukwu who are the precious jewels of my life whose mention illuminates and gives me inner peace.

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Attamah, C. E.

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Abstract

This study was carried out to assess the general work skills and work attitudes possessed by electricity/electronics graduates of Federal College of Education (Technical) Bichi, Kano State. Four research questions were developed and answered by the study while four null hypotheses were formulated and tested at P Ò 0.05 level of significance. The study was carried out in Kano State. It made use of survey research design. The population of the study was supervisors of registered 538 small-scale, medium-scale and large-scale privately and publicly-owned industries and establishments in the State. The sample on the other hand was 93 which were also made up of 68 supervisors of privately-owned establishments and 25 supervisors of publicly-owned establishments in Kano State. Proportionate random sampling technique was used to draw the sample from the population. A structured questionnaire was used to obtain data from the respondents for the study. The questionnaire was validated by three experts from the Department of Vocational Teacher Education, University of Nigeria, Nsukka. To determine the reliability coefficient, a trail testing of the research instrument was conducted using 15 supervisors of both government and private-owned establishments that employ graduates of Electricity/Electronics program of Federal College of Education (Technical), Asaba, Delta State. Cronbachôs alpha reliability method was now used in which a coefficient of 0.925 was obtained. The questionnaire was administered by the researcher with the help of three research assistants across the State. The entire 93 copies of the questionnaire administered were retrieved representing 100% retriever of the questionnaire. The data collected were analysed using mean and standard deviation to answer the research questions while t-test statistics was used for testing the null hypotheses (Ho) at P Ò 0.05 level of significance and 91 degree of freedom (df). The study found out that the general work skills, practical/technical skills and work attitudes possessed by the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State were not satisfactory. The study also identified ways through which the skills of the students of electricity/electronics of Federal College of Education (Technical) Bichi, Kano State could be improved upon to enable them to be relevant to the needs of the employers. In summary, there was no significant difference in the mean ratings of the responses of the respondents on 80 out of the 87 identified items in the study. Based on the findings of this study, it was recommended that, all the identified work-skills be used for improving the existing curriculum of electricity/electronics program of Federal Colleges of Education (Technical) in the country. This will help enhance the quality of graduates being produced by the colleges. Also, all the ten identified ways through which the skills of the students of electricity/electronics program could be improved upon should be implemented by the school administration in collaboration with other related agencies for quality assurance of the graduates.

CHAPTER ONE

INTRODUCTION

Background of the Study

The level of advancement of any nation, to a considerable extent, depends on her intellectual, scientific and technological development. Dillman (2003) regards intellectual, scientific and technological development as the foundation on which subsequent economic, political, industrial and social developments are built. It was in the realization of this fact as observed by Olaitan (1999) that several nations of the world accord top priority and spend huge amount of their income on science and *technical education* programs. Graham (2003) emphasized that the difference between advanced and developing nations is determined by the level of scientific and technological developments which virtually lies on the effective implementation of their technological education programs.

Technical education is defined in the National Policy education, FGN (2004) as that aspect of education that leads to the acquisition of practical and applied skills as well as basic scientific knowledge. It is therefore a kind of education that provides students with scientific principles relating to their fields of technology and requires them to make practical application of the concepts by working with tools and machines. The aims of technical education as stipulated in the National Policy on Education include:

1. To provide the technical knowledge and vocational skills necessary for agriculture, industrial, commercial, and economic development.
2. To give an introduction to professional studies in engineering and other technologies; and
3. To give training and impact the necessary skills leading to the production of craftsman, technician and other skilled personnel who will be enterprising and self-reliant.

However, the attainment of these laudable objectives depends on the qualitative and quantitative production and training of technical teachers who would invariably become the key implementers of the program under a classroom environment or their products being employed in the industry. For the production and training of these students, and more technical teachers and also for the objectives of the technical education to be achieved, the Federal government of Nigeria establis[1] Colleges of Education (Technical).

Federal Colleges of Education (Technical) are federal government-owned institutions that run the National Certificate in Education (NCE) program in vocational and technical

courses. Contemporarily, there are eight of these colleges in Nigeria and are situated in Akoka, Gombe, Asaba, Bichi, Omoku, Potiskum, Gusau and Umunze. They were established in 1967, 1977, 1987, 1988, 1988, 1988, 1990 and 1990 respectively (National Commission for Colleges of Education, NCCE, 1999). It should be noted that one of these colleges (Bichi) is located in Kano State, one of the states in the North western states of Nigeria. The major program obtainable in this college as contained in the minimum standards for Colleges of Education are Business, Agriculture, Technical, Home Economics, Fine and Applied Arts Education. The technical education program as one of the major programs provide students with the opportunity to specialize in metalwork technology, woodwork technology, building technology, electricity / electronics technology or automobile technology (FGN, 2009).

Electricity/Electronics, one of the technical education programs offered in the Federal College of Education (Technical), Bichi, Kano is designed to achieve the following objectives:

1. To produce qualified and competent Electricity/Electronics graduates who will be capable to teach Electricity/Electronics technology subjects in the junior secondary schools.
2. To produce NCE Electricity / Electronics technology graduates who will be able to inculcate the scientific, vocational and technological aspect of Electricity / Electronics technology, attitudes and values into the society.
3. To produce qualified NCE Electricity/Electronics graduates who will start the so much desired revolution of vocational and technological development right from the Nigerian schools;
4. To prepare students in Electricity/Electronics with necessary competencies so as to qualify them for a-two year post NCE degree program in Electricity / Electronics.
5. To Equip and produce qualified NCE Electricity/Electronics graduates with the right skills to engage in a life work in the industry as well as for self employment (FGN, 2009).

From the afore-mentioned objectives, it is glaring that the graduates of the NCE technical education in Electricity/Electronics technology program must be well equipped with adequate technical and professional competencies/skills as well as generic/self-employability skills if they are to perform creditably as anticipated.

Technical skills or hard skills in Electricity/Electronics is referred to as the ability or dexterity in the use of tools and equipment effectively and in an efficient manner, the ability to undertake work of the day such as troubleshooting an electronic device taking readings

from electrical instruments, troubleshooting circuit boards, electrical installations and so on (Barber, 2003).

Employability skills / soft skills / generic skills refer to anything that falls outside of the traditional product and development skill set (Stern &Crawford, 2008). Soft skills are the ability to communicate effectively, promote team work within the industry or organization, present ideas, manage projects and people, solve problems and provide excellent customer care.

In todayôs workforce, characterized by change and increase ing competition for jobs, it is important for educational programs implementers to be aware of the qualities that are valued by employers in the industry. It is the goal of the Federal Colleges of Education (Technical) to design and implement programs that are appropriate to the missions and goals of the government and to supply the workforce with relevant skills according to their needs and that of stakeholders and, or employers. Federal Colleges of Education (Technical) have the responsibility to provide graduates with knowledge in the Professional field with intellectual skills and ability to apply theory to practical situation. Other generic skills as identified by the Nigerian qualification frameworks such as the ability to communicate, possession of attitude and values of responsible citizen are areas that are expected to be developed and entrenched in the minimum standards for teaching students and are expected to provide graduates who are relevant to meet the needs of the industry and society.

Some studies in employability view employability in terms of graduates finding jobs and maintaining them through the learning of new skills necessary for different functions in the industry or establishment. Hillage and Pollage (1998) see employability as having the capability to gain initial employment, maintain employment and obtain new employment if required. In other words, employability is referring to individual capability to get and keep the desired jobs. According to Harvey (1999), the employability of a graduate is the propensity of the graduate to exhibit attributes such as the technical skills and generic skills that employers anticipate will be necessary for the future effective functioning of their organization.

Lie, Pang and Memsur (2006) ascertain that some employers seems to prefer graduates who have and possess good inter-personal skills and communication skills, team work spirit, and high level of flexibility and adaptability in any working environment. Employers and their representatives consistently say that to succeed at work, most people in future must develop a range of personal and intellectual attributes beyond those traditionally

made explicit in programs of study in Electricity/Electronics technology (Azam and Branchle, 2003).

Hussan, Mokhtar, Ahmad and Mustapha (2010), stated that human capital development is an effort to achieve cost savings and improve the performance of the industry. Kezar, (2010) defined human capital as an important element for upgrading company performance and improve productivity of employees and sustainability to be more competitive. Human capital is referred to as a process involving training, education and professional initiatives to improve the knowledge, skills, abilities, values and social assets that will lead to employee job satisfaction and performance while improving the performance of the company or industry (Branchle and Azam, 2004).

Human capital is referred to as the knowledge, expertise and skills acquired by a person through the medium of education and training. Tertiary education like the Colleges of Education (Technical) plays an important role in the provision of human capital for achieving improved economy or for transforming our economy. Industries were competing against each other in order to adapt and remain in the market. In order to achieve this goal, the industry must have a competitive employee that will have the ability to withstand the global market. In order to achieve that, employer spends a lot of investment to develop the human capital of workers to master the skills needed in the arena of globalization. However, the cost of developing human capital is increasing: with these, employers expect educational institutions to produce graduates with employability skills required by the market without additional training from the industry. Therefore, graduates with employability skills will have an advantage in getting jobs in the industry. The institutions of education such as the Colleges of Education (Technical) must produce graduates who not only have technical skills but also non-technical skills which is the employability skills. Hence, this study is therefore geared towards finding out the employerôs assessment of the general work skills and work attitudes possessed by Electricity/Electronics graduates of Federal College of Education (Technical) Bichi, Kano State.

Statement of the Problem

In recent times in Nigeria, many students look to educational institutions to provide them with the type of education that will prepare them for immediate employment and furthering their education or both. The World Bank (2002) revealed that when enterprises for training are lacking, skilled manpower and opportunities for work tend to be in short supply. Hudelson (2006) stated that schools should be required to teach and test students before

awarding certificates of initial mastery which would amount to job ticket for graduates. A situation where graduates of vocational education programs like those of the Colleges of Education (Technical) remained unemployed for a long time because they lack the theoretical knowledge, practical/technical skills and employability skills competencies as well as the right attitude to work is a signal that something is wrong and needed an urgent solution.

In todayôs workforce characterized by change and increasing competition for jobs, it is important for educational programs implementers to be aware of the qualities that are valued by employers in the industry. It is the role of Colleges of the Education (Technical) to design and implement programs that are appropriate to the missions and goals of the government and to supply the workforce with relevant skills according to their needs and that of stakeholders and, or employers. Colleges of Education (Technical) have the responsibility to provide graduates with knowledge in the professional field with intellectual skills and ability to apply theory to practical situations. Other generic skills as identified by the Nigerian vocational qualification frame works such as the ability to communicate, possession of attitudes and values of responsible citizen are other areas that are expected to be developed during the course of the program/ study.

World Bank (2005) found that graduates of leading Colleges of Education (Technical) in Nigeria did not meet the expectations of industrial employers despite their high standard certificates. Further, Uwameiyer (2000) and Okorie (1987) found that Colleges of Education (Technical) in the Southeastern and Southwestern States were inadequately equipped regarding training facilities, teaching staffs, and libraries for the implementation of NCCE minimum standards. Consequently, the graduates of these colleges were discriminated against in employment for they do not possess the knowledge and technical skills competencies as well as employability skills competencies required for first employment in industries.

It is evident that Colleges of Education (Technical) graduates of Electricity/Electronics programs were not adequately employed by the industries, and some of these graduates that eventually got employment did not possess the level of theoretical knowledge, technical/practical skills competencies and employability skills expected by the employers. If the industries are to survive, the school curriculum must be dynamic and able to adjust to new situations and environment that help to improve on-the -job effectiveness of future graduates. It is very essential therefore that higher education curriculum should be made flexible to allow inputs from the industry in decision- making process. This input is increasingly important due to the rapid technological advances. The more that is known about

the competencies needed in the electricity/electronics careers and is incorporated into the curriculum development, the more employable electricity/electronics graduates will be in the market place, and the input from employers would provide a bench mark against which future students would be compared and serve as an assessment indicator. Consequently, the need arose to state the problem thus, what are the employersô assessment of the general work skills and work attitudes possessed by Electricity/Electronics graduates of Federal College of Education (Technical) Bichi, Kano State?

Purpose of the Study

The purpose of the study is to identify employersô assessment of the general work skills, technical skills and work attitudes of Electricity/Electronics graduates of the Federal College of Education (Technical), Bichi. Specifically, the study will seek to:

1. Determine employersô assessment of the general work skills possessed by Electricity/Electronics graduates;
2. Find out the employersô assessment of the technical/practical skills possessed by Electricity/Electronics graduates;
3. Determine the employersô assessment of the work attitudes possessed by Electricity/Electronics graduates;
4. Identify ways through which the skills of students of Electricity/Electronics programs could be improved to enable them to be relevant to needs of the employers in Kano State.

Significance of the Study

The findings of this study on Employers Assessment of the General Work Skills and Work Attitudes Possessed by Electricity/Electronics Graduates of Federal College of Education [Technical] Bichi, Kano State will be of immense help to administrators, instructors and lecturers in Federal Colleges of Education [Technical] as well as to employers of the graduates of these programme throughout the country. Educational institutions exist to serve the needs of industries, but often the quality of the service is not known. The educational institution may not know exactly to what extent she is really serving the needs of industries through the graduates trained by the educational institution.

The findings of this study, by providing information to administrators of Colleges of Education [Technical], on how satisfied employers are with her graduates, will enable her to introduce changes in her programme that will make her programmes more effective, and

employers more satisfied with their graduates. It could therefore be said that the findings of this study could lead to a better College of Education [Technical] programmes.

The findings of this study could also be of benefit to employers of Colleges of Education [Technical] graduates. Industries and employers will benefit when they have more efficient and more skilled workers. Such graduates would have a higher level of skill with better attitudes to work. Such a state of affairs will result in lower cost of production and more profit for the employers.

The findings of this study could be of use to Federal and State Education Authorities. The findings of this study could be utilized by agencies such as National Board for Technical Education [NBTE], National Business and Technical Education Board [NABTEB] and National Commission for Colleges of Education [NCCE]. These bodies are interested in high quality technical education programmes. Information on what employerôs think of the current graduates will enable them develop strategies for improving the College of Education [Technical] programmes.

Research Questions

The following research questions were formulated to guide the study:

1. What are employersô assessments of the general work skills possessed by electricity/electronics graduates?
2. What are the employersô assessments of the practical/technical skills possessed by the electricity/electronics graduates?
3. What are the employersô assessments of the work attitudes possessed by electricity / electronics graduates?
4. What are the ways through which the skills of the students of electricity / electronics of College of education (Technical) could be improved upon to enable them to be relevant to the needs of employers in Kano State?

Hypothesis

The following hypotheses will be tested by the study at 0.05 level of significance:

H0$_1$: There is no significant difference on the mean responses of supervisors of government and private-owned establishments on general work skills possessed by the graduates of electricity/electronics programmes of Federal College of Education (Technical), Bichi.

$H0_2$: There is no significant difference on the mean responses of supervisors of government and private-owned establishments on practical/technical work skills possessed by the graduates of electricity/electronics programmes of Federal College of Education (Technical), Bichi.

$H0_3$: There is no significant difference on the mean responses of supervisors of government and private-owned establishments on work attitude possessed by the graduates of electricity/electronics programmes of Federal College of Education (Technical), Bichi.

$H0_4$: There is no significant difference on the mean responses of supervisors of government and private-owned establishments on ways through which the skills of the students of electricity/electronics programmes of Federal College of Education (Technical), Bichi could be improved upon.

Scope of the Study

The study will be delimited to the employersô assessment of the general work skills and work attitudes possessed by electricity/electronics graduates of Federal College of Education (Technical) Bichi, Kano State. All the 538 small scale, medium scale and large scale privately-owned industries and establishments in kano state who employ electricity/electronics graduates of Federal College of Education [Technical] Bichi, Kano State will comprise the population for the study.

The assessment by the employers will focus on the determination of the level of employability and general skills, practical/technical skills competencies as well as the work attitudes possessed by the graduates. Skills of non-technical nature such as language skills and general mathematical abilities, as well as work skills not specifically in electrical and electronics will not be included in the scope of the study.

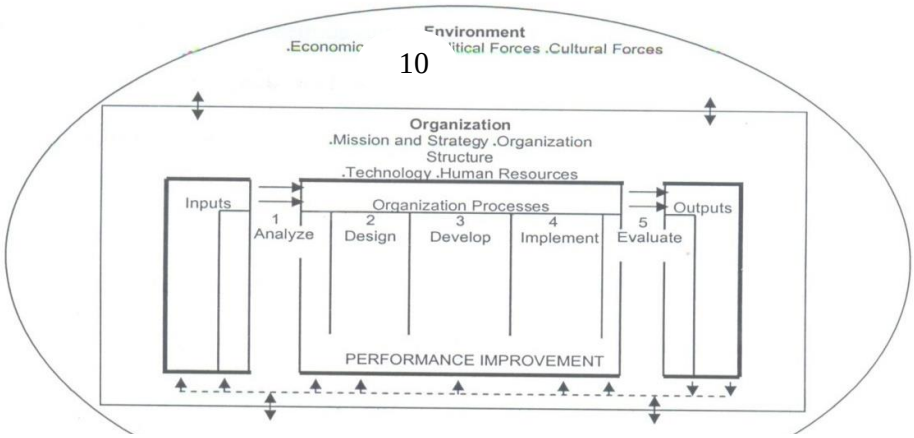
CHAPTER TWO
REVIEW OF RELATED LITERATURE

Review of related literature is presented and organized under the following sub-headings:

- Conceptual Framework for the study.
- Need for the Possession of Relevant Theoretical Knowledge Competencies by Industrial Employee Craftsmen.
- Need for the Possession of Relevant Practical/Technical Skills Competencies by Industrial Employee Craftsmen.
- Need for the Possession of Good Work Attitudes by Industrial Employee Craftsmen.
- Theoretical Framework of the Study
- Review of Related Empirical Studies.
- Summary of Review of Related Literature.

Conceptual Framework

Swanson (1994) conceptualized a Systems Model for Performance Improvement (SMPI). This model was developed as a vehicle for industry to assess employees on their performance within the company (figure 1). The SMPI was designed to increase individual performance and productivity.



Swansonôs (1994) Systems Model for Performance Improvement (SMPI). According to Swanson (1994), the SMPI investigates all factors that influence or impact the organization as a whole. Such factors consist of the environment, the organization, and the performance improvement of the individual within the organization. Environmental factors consist of economic, political, and cultural forces. These factors derive from the environment but directly impact the organization. The organizational factors assist in defining the organization. These factors consist of the mission and strategy of the organization, the overall structure of the organization, the technology used within the organization, and human resources.

The performance improvement factor was designed to increase productivity and maximize financial gains while providing quality services to the customer. This factor deals with inputs and outputs. Organizations acquire inputs, such as people and materials, from the environment (Swanson, 1994). Various factors contribute to defining the organization. ñExamples includeé , from an educational perspective, the employment success of its graduatesò (Finch & Crunkilton, 1999). After the inputs have been acquired by the organization from the environment, they are then processed and returned back to the environment in the form of outputs, which consist of goods and services (Swanson, 1994). These factors can directly affect the overall success of the organization. In order for improvement efforts to be enhanced and for inputs to be exchanged for outputs, a systematic process has to be carried out. This systematic process includes five phases: analysis, design, development, implementation, and evaluation. Without careful diagnosis of any of these five phases, performance will not be improved to its maximum potential.

The first phase, analysis, is the most vital to the improvement and success of an organization. The analysis drives the remaining four phases. In this phase, developers and managers collaborate to identify what the requirements of the organization are and what the goals and standards should be. According to Swanson (1994), they determine ñwhether management actions, development efforts, or a combination of both will effect the change in

performance. In addition, [they] determine precisely what people are required to know and be able to do to perform in the workplaceò. The analysis phase is split into two areas: organizational performance diagnosis and work expertise diagnosis. Organizational performance diagnosis is primary. It is a holistic approach that identifies the actual, desired, and individual performance goals and standards of the organization. The work expertise diagnosis is secondary and takes into consideration the details and expertise needed to be successful within the organization.

The remaining four phases build on the information gathered in the analysis phase. According to Finch and Crunkilton (1999), the *design* phase includes both program and training design, whereas the *development* phase focuses on materials development and pilot testing. In the *implementation* phase, program plans and training are incorporated into the organization. And last, the *control* phase includes evaluating programs and training as well as deciding whether or not to continue these efforts. For the purpose of this study, graduates of the College of Agriculture, Food and Natural Resources were referred to as the inputs. They were analyzed according to what they believed was important and what they were able to contribute, in the way of employability skills, to the workplace. Based on the findings of this study, the existing

College curriculum will be evaluated to assist future graduates in becoming employable.

Need for the possession of Relevant Theoretical Knowledge Competencies by Craftsmen.

Research findings appeared to support the idea that theoretical knowledge guided the practical aspect of getting a job or work done and that implied that theory should come before practice. Hornby (2003) explained the term theoretical knowledge to mean an idea or mental plan of the way to do something; a systematic statement of principles involved in getting a thing done; that branch of an art or science consisting in knowledge of its principles and methods rather than in its practice. Theoretical knowledge aided the craftsmen in the understanding of the occupation in which training is received and its scope included the trade theory and the general education needs of the occupation. The trade theory and general education levels acquired by a worker to a great extent determined the quality of jobs performed by worker.

Trade theory as a component of theoretical knowledge needed by craftsmen is the non-practical information which directly relates to the understanding of the concepts, principles, techniques and methods of the trade or occupation in which the craftsman received

training prior to employment. The NBTE (2003) explained that in the trade theory lessons, instructors applied the principles and concepts in solving trade science and trade calculations problems while teaching their students. In an analysis of the knowing content of an occupation, Bacon (2009) found that the goal in analyzing knowledge tasks was to identify the key points, facts, concepts, etc, that the trainee needed to master and to be able to demonstrate competence in the knowledge tasks as they were stated; the analysis should cover the major units of knowledge described by the task statement. The content identified in the analysis should be sufficient to allow the learner perform the knowledge tasks at the level t stated in the tasks, Blank stressed.

The revelations of Bacon (2009) and NBTE (2003) regarding the role of theoretical knowledge in the practice of oneôs occupation and oneôs progress in it gave impetus to the attack on some types of technical training organized by industries for craftsman , in which more trial and error were emphasized.

When introducing vocational curricula in developing countries, Ogwo and Oranu (2006) advised that vocational educators should make sure that instruction was of sufficient depth and thoroughness to ensure the development of well-trained and employable skilled individuals who could perform and function on their own as efficient, self-reliant and productive citizens. Further, Ivowi (1999) suggested that the curriculum content for science and technology education at the secondary education level should provide for an adequate introduction of the relevant concepts in areas necessary to meet needs for food production and maintenance of essential goods and services; they should be linked with industries to avoid making technical certificates merely an additional paper qualification.

Ogwo and Oranu (2006) revelations with respect to the diversification of vocational curricula by the incorporation of adequate and relevant theoretical content clearly underlined the importance of non-practical aspects in the orientation of employees and especially the blue collar job workers.

Examining the theoretical knowledge acquired by Nigerian radio and television repairmen, Okon (2004) found that: they had great deficiency in the theoretical knowledge of their trade because many of them know what to do practically but did not know why they did them; some did not even understand simple electrical circuit diagrams; they had little opportunity to up-grade their theoretical knowledge and or learn about new electronic components and devices; and they complained of the difficulty they encountered in obtaining names of electronics parts needed for repairs.

It was also suggested by Ozo (2007) that there was need for theory acquisition in technical subjects so that effectiveness in repair and maintenance of appliances and equipment would become a function of factual knowledge and diagnostic skill acquired from experience in real or simulated environment.

Findings of Ozo (2007) and Okon (2004) stressed that in the training of repairmen in skilled occupations, emphasis should be on theory acquisition right from the inception of the course and trainees and trainers discuss intelligently and authoritatively what they carry out in their workshops.

Discussing the position of the craftsman in the organ gram of the engineering team, Brockley and Robertson (2010) found that the craftsman was able to understand basic technical drawing and engineering designs, design theories, engineering technology, applied science and trade calculations, and was capable of learning from published works as well as from expert advice. In the same vein, Arayris and Schon (2009) explained that theory learning took place in the classroom only. Further, Skemp (2009) stressed that knowing ôhowô and being able to ôdoô was the connection between having arrived at a plan and putting it into action. Furthermore, Ogwo (2004) found that the theoretical content of any curriculum was made up of the related technical information which enabled the student to adequately comprehend the subject matter and carry out the related practice.

Revelations of Arayris and Schon (2009), Skemp (2009), Ogwo (2004), and Brockley and Robertson (2010) with respect to the relationship between theory and practice suggested that both were inseparable for authentic learning and work competence to be realized optimally.

The place of general education in the preparation of prospective workers cannot be over-stressed. Which worker can perform without adequate language communication skills, computational and mathematical skills and understanding of basic scientific laws required in problem identification and solutions? The NBTE (2003) explained that general education was a component of the curriculum of technical colleges which aimed at providing the student with a complete secondary education in critical subjects like English language, physics, chemistry and mathematics, to enhance the understanding of machines, tools and materials of their trades, and their application as a foundation for post secondary technical education. Similarly, the FGN (NPE) (2004) used the term universal basic education in place of general education; it stated that it is the education given in a variety of forms depending on needs and possibilities, and will be provided for all citizens.

The concept of general or universal education as proposed by FGN (NPE) (2004) and NBTE (2003) pointed to the fact that it was the education needed by all persons ï children, youths and adults to enable them live and work successfully in their communities.

On another development, Anibaba (2003) defined general education as a mode of enquiry or thinking that should be common or general to all educated men and women; it suggested an effort to return to what was called liberal education which was a fusion of special and general studies, with the special studies providing the depth while the general studies provided the breadth. Also, the United States National Commission on Secondary Vocational Education (USNCSVE) (2001), while addressing general education content of vocational secondary education revealed that: There is need for diligence in the academic education of secondary vocational students, for it may be hoped that tertiary institutions will improve upon what is offered to their prospective students, it might be the last chance to mould those who choose not to attend higher education; courses labeled academics provide vocational preparation for students who work in different fields; without these related courses as time for doing and not time for thinking, as easy and not difficult, and as practical and not abstract, similarly the same students will perceive physical sciences, mathematics, civics and language communication as time for thinking and not time for doing, as difficult and not easy, and as abstract and not practical.

The views of Anibaba (2003) and USNCSVE (2001) revealed that general education was very vital to vocational students at all levels. In Nigeria from time immemorial, students even downgrade subjects taught in isolation of general education and regard them as irrelevant to their life aspirations and the world of work.

Addressing the need for the understanding and communicating in national and international languages like English language by all persons, Ikiwe (2004) noted that: English language is used to describe, investigate, explain, discuss, participate in learning situation, control thought, and means of activities of trade, communication, commerce, science, education and technology; A personôs status, earning power and social prestige in Nigeria are dependent to a large extent on that personôs competence in English language; Products of technical and vocational programs who are weak in English language will be handicapped in locating information, remembering facts, recording and under-standing new materials, terminologies, ideas, concepts, vocabularies, symbols and even to relax for leisure; and Many of the textbooks, machines, gadgets, equipment, etc are written, labeled and produced in English language, and without a good command of the subject, students would be constrained in understanding what is taught in and outside the class.

In the same vein, Abinisi (2008) opined that the comprehension of English Language by craftsmen and technicians would help in:

(a) Acquisition of knowledge and skills which facilitates the understanding of foreign textbooks, journals, etc;
(b) exposition of information on the world labor market, foreign exchange, import and export facilities, new technologies, commerce, industries and agriculture, and
(c) exposition to facilities for industrial practices and periodic in-service training abroad.

Similarly, Mbata (2008) discovered that some vocational technical students encountered problems in writing their examinations and completing their project reports because they lack basic reading and writing skills. Also, Medahunsi (2001) found that many vocational technical students lacked basic comprehension and reading skills to get many ideas, select important details, answer specific questions and draw inferences correctly.

The result of studies carried out by Abinisi (2008), Medaunsi (2001) and Mbata (2008) gave clear indications that for vocational-technical graduates to be occupationally competent and succeed in the wider world, they must speak and write English language correctly.

Most occupations in recent times needed the understanding of science and mathematics and in technology education the need is more paramount than in other non-applied science based vocations. Logan-Reid (2000) advised that every child should revive a reasonable level of science and mathematics education for preparation for life in a technological world regardless of oneôs proposed career. To achieve the mastery of science and mathematics education, Gathany (2009) opined that the effective means of promoting interest of students in the subject was to give them opportunity to develop and solve their problems and perform experiments. Similarly, Adegbula-Adesida (2009) described mathematics as a universal language for establishing concepts and formulating laws for the sciences and applied to everyday human activities.

The views of Logan-Reid (2000), Gethany (2009) and Adegbule-Adesida (2009) regarding the place of science and mathematics education to workers provided the background for improved teaching and learning o the subjects in institutions of learning. Virtually, every vocation or profession needed a reasonable level of understanding of science and mathematics since they are used in the families, market places, work places, religious institutions, etc.

Dwelling on the need for early teaching and learning of science and mathematics in secondary schools, Johnson (2006) and Yako (2003) pointed out the it would enhance an

early development of scientific and mathematical thinking and acting in the youths. These opinions agreed with the saying that an early bird was more likely to catch the warms than the late ones. Once a solid foundation for science and mathematics was laid early in a childôs life the probability of better performance was higher and these were what findings of Johnson (2006) and Yako (2003) were implying.

In another perspective, Cowper and Macintosh (2003) seriously challenged the tendency of some vocational institutions to give more emphasis on specific vocational preparation on the ground that:

(a) It is essential to exploit more fully the motivational effectiveness of courses linked to the world of work, leisure and living which young people expect to enter on leaving school;
(b) Public and professionals should recognize that a human and liberal education can be given through courses that have practical, technical or occupational bias; and
(c) The various client groups (general and vocational client groups (general and vocational should not be too rigidly distinguished.

Liberal education prepared one for the challenges in oneôs first job and career; it gives one the skills and habits to continue living throughout oneôs life time (Hurn, 2010). Again, Bacchus and Broch (2009) revealed some attempts made world-wide in recent time to make secondary school curricula more relevant to the world of work by stopping the unrealistic separation of general and vocational education.

Adequate and appropriate proportions of general and vocational education should be adopted in order to produce workers who would be occupationally competent in terms of satisfying their employers and customers. That was the message Cowper and Macintosh (2003), Hurn (2010) and Bacchus and Brock (2009) were disseminating to training institutions and industries.

As vocational education prepared persons for todayôs jobs, arrangements should be geared towards accommodation of future jobôs challenges. In that regard, Good (2004) recommended that vocational education of the future should incorporate:

(i) Basic or core competencies that are directly related to success in a working environment
(ii) Competencies that are common to several vocational programs should be taught in a manner that will eliminate unnecessary overlay and duplication of efforts; and
(iii) Development of specific competencies after students have established a sound foundation of core concepts, knowledge, skills and attitudes.

It appeared that some recent research findings were being capitalized on in the delivery of functional craftsmanôs and technicianôs education devoid of narrow specialization which hitherto was the trend in training programs provided by industries and some technical training and trade centers. That was the message that Goods was attempting to pass across to trainers and trainees.

There had been a trend towards up-dating school curricular to integrate English, mathematics, science and social studies into vocational education to give graduates the problem solving transferable and critical thinking skills needed by employers; employees need these skills: in order to be hired, to keep the job, to move beyond entry level positions; develop ability to follow directions; set priorities; and communicate clearly with co-workers, supervisors and customers (Steinauer, & Bennet, 2006).

Steinaner and Bennet (2006) pointed out that getting a job was one thing but keeping the job, growing in the job and solving routine problems are other determinants of successful workers. Workers should not just be rolling stones regarding the habit of indefinite mobility of labor, but rather job changes should be for good and at appropriate time during working life. A good general education is known to be the best route to successful working lie and it should be integral components for the education of workers at all levels.

In another development, Giachino and Gillington (2008) found that a good program of technical education with proper articulation of general education should engender in its graduates: curiosity for scientific knowledge and endeavor, curiosity to acquire a sound knowledge of mathematics and science, knowledge and skill to apply sound engineering principles to the solution of problems dealing with product development and production. The understanding of industrial materials, their characteristics and usages, and the ability to comprehend supervisory functions, quality control and material handling techniques.

Revelations by Giachino and Gillington (2008) would give impetus to all classes of workers to appreciate the fact that without a good background of liberal education they would be seriously handicapped in the discharge of their civic responsibilities as workers and citizens.

Examining the impact of science in the education of the child, Ramphal (2005) pointed out that: understanding of science contributes to the development of individuals whose thinking was rational and non dogmatic and they were prepared to test evidence before drawing conclusions. The world has become an increasing technological place and all countries whether developed or developing have become dependent on efficient use and maintenance of things scientific and technical. Young people who are educated in this way

can enter employment either direct from school or by way of further or higher education, thus form part of the pool of skilled manpower so essential to national development.

The advent of scientific studies made it feasible for human beings to solve their social, domestic and function as scientists; be it in their equipment maintenance, software and hardware repairs, metal fabrication, forging and foundry works, electrical electronics services and installation, etc. craftsmen are very significant in the social and industrial which is rooted in science and technology.

Need for the possession of practical skill competencies by industrial craftsmen.

Practical skill acquisition by all workers is best achieved when the background theoretical knowledge theoretical knowledge has been comprehended and appropriate facilities provided for training and working. A situation where practical training is attempted without the necessary materials and equipment cannot stand the test of time. Consequently, many training institutions have been accused of operating technological education below minimum standard especially with regard to utilization of relevant infrastructural facilities.

Practical skill acquisition is concerned with the application of knowledge to useful ends or to put theoretical knowledge to practical use (Webster, 2008). Webster stressed that practice is doing of something and without practice, theory is useless. Further, Arayris and Schon (2009) defined practical skill as the ability to apply theory or put theory into practice. Similarly, Nilsson (2003), found that Swedish secondary vocational schools provided training in practical skills organized so as to resemble workshop activities focusing on productive craftsmanship in conditions akin to those of the factory.

With the explanations of the term practice by Arayris and Schon (2009), Webster (2008) and Nilsson (2003) views about the relationship between theory and practice has become clearer. It implied that practice cannot be successful without the related theory and theory without practice is useless.

Discussing the mechanism for manpower improvement in Nigeria, Olaitan (1999) revealed that employers considered the products of technical institutions unusable without further training and technical college programs had little practical work content to make their graduates readily employable. Kazanias and Perkinson (2002) revealed that for scientific training to yield best results, it must be practiced, and practice could only be learned by practice. The views of Kazanias and Perkinson(2002) ; Olaitan (1999) on the place of practice in technical skill acquisition left no one in doubt regarding the importance in most human endeavors.

Finch and McGough (2005), and Eze (2002) agreed that practical skill emphasis should be integral components of vocational education, and they made their points thus: educational programs should give sufficient attention to practical skill acquisition and encourage creative efforts, for vocational program graduates to succeed in the labor market, they needed to be exposed to the realities of the work place, and opportunities that may be school supervised and co-operative work experience in industries, and African schools should be vocationalised by making practical skill training available for effective living, self help, job generation and primary health care.

There is no gainsaying the fact that a major problem of vocational education in Africa and other developing economies is the dearth of practical skill training. Graduates of vocational programs with adequate and relevant practical skill training would become job generators rather than job seekers. Osuagwu (2001), Finch and McGough (2005), and Eze (2002) stressed these points in their findings and they should be taken serious.

In a study on education and the world of work, Anya (2003) discovered that employers were satisfied with the theoretical content of vocational education but were dissatisfied with the practical aspects because the on-the-job coverage was below expectation. The explanation provided for the problem included, shortage of training facilities, poor communication between industries and training institutions and lack of dynamic leadership by governments and their agencies. The Nigerian Education, Research and Development Council (NERDC) (2004) and Nwachukwu (1999) found the need for a closer link between education and work, knowledge and know-how, knowing something and knowing how to produce it, in order to make education contribute effectively towards African development. To achieve the objective, NERDC recommended that: At the secondary education level students must be prepared for productive work by professionally equipping them with the necessary skills and aptitude for practical work. Whereas it is the job of the technician to break down the production plan into detailed design, the skilled craftsmen must be trained to produce the finished article; making use of their technical knowledge, manual skills and detailed application of relevant tools.

Furthermore, Earle (2003) revealed that the craftsman must see that the engineering design was produced to correct specifications of the engineer; the achievement of that must depend on the application of theory and practice in the realization to the engineerôs objective.

The mode of training and work of the craftsmen as highlighted by Anya (2003) Earle (2003) NERDC (2004) and Nwachukwu (1999) if effectively adopted, developing countries would be better prepared for their industrialization and development.

Oye (2009) revealed that no amount of school based practical training would fully equip Students Industrial Work Experience Scheme (SIWES) for technical college students by the NBTE in 2003. The scheme was intended to expose all full time students of technical colleges to real life work experience in industry prior to graduation. Justifying the integration of industrial work experience for vocational technical students, Evans and Hair (2009) identified the following merits of the exercise thus: It should quickly respond to changes in the labor market, It needs lower capital investment in space and equipment than practice in the school laboratory, highly specialized equipment which cannot be afforded by the school will be provided because of production demands, It stimulates desirable attitude towards work and work atmosphere is extremely difficult to reproduce in the school, and regular attendance at work are more demonstrable on-the-job than in the school, It is extremely difficult to develop realistic attitudes towards speed, efficiency and quality of work in a school based workshop, and about 80% of students who performed creditably well are usually offered full time employment in their host industries after graduation from the school.

For the SIWES to be optimally realized, Anastasia (2010) suggested that it needed a careful planning and must be supervised and monitored strictly to ensure that from a qualitative stand point, it met the expectations of the students, institutions and industries. The evaluation of SIWES calls for the determination of how well the students have developed work competence in the use of tools and materials of the industry (Ogwo 2004).

School based practical training could be augmented by SIWES as suggested by Evans and Hair (2009), (Ogwo 2004). Oye (2009) Anastasia (2010) and NBTE (2003). When that was realized by developing economies their match towards economic and industrialization would have taken off.

In another exposition, the World Bank Report (2009) found that a key concept in practical skill development was the determination of their number, types and techniques actually used in the production process; selecting the most effective ways of acquiring these skills among the alternatives that could be provided by the training system, and ensuring that once acquired, these skills would be properly deployed and used. Discussing the role of practice in scientific and technological studies, Nash (2010) discovered that:

1. If scientific training is to yield its most eminent results, it must be practiced; a child must handle the plants and dissect the flower for himself; do not be satisfied with telling him that a magnet attracts iron; let him see that it actually does that; let him feel the pulls of one magnet upon the other for himself, and

2. Practice can only be learned by practice; the farmer must be made by and through farm work.

Blank (2002) opined that students should be shown how to go about attempting to perform what was presented and they should have resources for self-check, an answer key, an experienced person to help them determine whether the practice was accurate or not and if not, why and what to correct. Practice steps must require the students to actually do what was presented and immediately after practice, they must be helped to compare their performance with the ideal performance, Blank stressed. Further, in a critique of the orthodox method of delivering vocational secondary education, Blank (2002) found that: Very few trainees who began training ever completed them and drop-out rate was as high as 75% in some programs, up to 90% of students graduating may be only minimally competent, heavy reliance on lecture methods lasting hours leads students to dissatisfaction, absenteeism and indiscipline, students receive little or no immediate periodic feedback so that they can correct their mistakes; a final grade is a studentôs only indication of how he or she is doing, many trainees who are only marginally competent but show up regularly and stay out of trouble receive certificates, employers have little or no indication of exactly what successful graduates can actually do and transcripts and course titles are of little help, there is over-emphasis on theory memorization of facts and terms and not enough stresses on practice, variation in quality from one program to another, and this quality seems to be determined primarily by instructors, programs are at times irrelevant to the unique needs of students with special needs, some programs fail to meet the real needs of students and employers, and in many programs students are unable to test out and receive credit for those competencies already mastered.

In another development, Robert (2009) found that vocational educational institutions should have a broader curriculum that emphasizes practical skills that involved the use of tools in the workshop by the students so as to prepare them for living as well as for making a living; graduates of these schools must undergo extensive pre-service training before they are employed.

Robert (2009), World Bank Report (2009), Nash (2010) and Blank (2002) addressed the irrelevances of certain vocational secondary education programs by pointing out that some were characterized by too much theories, role memorizations, lack of application of what was learnt and advised that such curricular should parallel living conditions in industrialized world.

The effect of teaching-learning facilities on the possession of practical skills competencies by craftsmen should be pursued with vigor while in training.

The teaching and learning facilities available in training institutions to a great extent determine the quality of training received by the clientele. Okorie (2001) revealed that vocational programs housed out-dated, inadequate and improperly equipped physical facilities and had no claim to quality and could not provide realistic hand-on-experience to students being prepared for work. Similarly, Agwu (2004) explained that facilities consisted of all those things in the school or its environment that might be used to help teaching and learning; human and material resources. The NBTE (2002) identified and listed the facilities for the teaching of the national technical certificate (NTC) program of technical colleges thus: Physical facilities-state, accommodation for workshops, laboratories, classrooms and studios, equipment for the workshops, laboratories, classrooms, studios, etc. library resources-books, journals, periodicals, etc. finance and human resources.

Facility availability for utilization were high-lighted by Okorie (2005), NBTE (2002) and Agwu (2004) would if capitalized upon by training institutions, make students not only competent but also masters of what they learnt.

Analyzing facilities, equipment and library services in technical colleges in Delta state of Nigeria, Uwa (1999) found that these resources were inadequate for the implementation of the NBTE national technical certificate programs. Similarly the national commission for colleges of education (NCCE) (2002) reported that in Nigeriaגs budgets of the past years, education had continued to enjoy the second highest financial allocation, yet there were still the perennial problems of inadequate equipment, shortage of teaching materials, insufficient materials, poorly equipped laboratories and workshops for teaching science and technology courses in Nigeria schools and institutions. In the same vein, Levin & Lockhead (2003) found that schools in developing countries often lacked most basic resources needed for education; facilities, text books, etc. further Madu (2001) revealed that ordinary infrastructural facilities such as water, electricity and gas which institutions world over took for granted were not available in Nigeria school laboratories and workshops.

Information from the findings of Okorie (2005), Madu (2001), Uwa (1999), NCCE (2002) and Levin (2003) brought to light the inadequacies in the facility provisions of schools and institutions in developing countries. It would give impetus to efforts of public and private sectors in providing teaching-learning resources to training institutions for them to do good job in short term and long term bases.

In another development, Mordu (2003) suggested that to promote school to industry transition, training institutions should adopt proper selection and use of tools with high degree of closeness to those used in industries in which they would eventually work. there is no gainsaying the fact that school environment should replicate industry in terms of equipment and other facilities used for teaching and learning.

it was noted by Rosen and Jerdee (2005) that equipment and facilities problems arose from wrong materials being supplied, insufficient materials for a given class size, equipment not functioning and without spare parts for replacing faulty ones. Again Jegelio(2007) observed that may science laboratories and technology workshops in Nigerian schools were filled with obsolete and malfunctioning equipment, laboratories and workshop consumable materials were equally in short supply. in the same vein, Lacoe (2002) found that successful training programs was a function of availability of functioning equipment, sound instructional program and practical inherent in them. Further, Stallsmith (2002) suggested that teachable content must be determined before judging what types of tools and how many of each were required, wise acquisition of equipment helped to ensure smooth operating training programs free from disrupting break-downs and prevention of frustration of teachers and students. Furthermore, Gorton (2003) revealed that a well maintained, bright, sparkling and flexible physical facility suggested a school that people cared about proper selection and storage of small tools and portable equipment were exceedingly important functions of an effective workshop or laboratory and they related directly to the achievement of the course objective, Gorton emphasized.

The implications of the findings of Jegelio (2007) Lacoe (2002), Stallsmith (2002), Gorton (2003) and Rosen (2005) regarding obsolescence of training facilities in schools, determination of tools to be supplied and their storage as well as their proper maintenance, provided basis for ensuring that proper facilities were procured, stored safely, maintained and used by trainees and trainers at various levels of worker preparation. Effective schools and training institutions capitalized on these for their success and Nigerian schools and institutions should emulate their approach for their optimal performance.

Availability of finance is ósine qua nonô to the success of most human endeavors. Capital and recurrent expenditure funds enabled institutions expand, up-date her facilities, pay personnel emoluments, purchase training materials for practical and projects, maintain facilities and replace small tools (NBTE; 2002). Ogwo (2004) reported that technical education was capital intensive; textbooks and educational materials were scarce, book publishers insisted on publishing text materials where there were large sales and technical

education did not meet that expectation because of low studentsô enrolment. On alternative side government revenue, Lambert and Lio (2003) suggested as follows: Leasing the school workshops and laboratories to industrialists for use and maintenance during and or after school hours, commercialization of services and workshops of the institution-sales of finished products; contracting jobs outside consultancy services; etc, direct contracts using school facilities and human resources to execute them; privatization-ownership; management and control of the workshops and facilities by shareholders; and establishment of development banks and education trust funds where students and institutions can obtain loans.

Suggestions on alternative sources of funding educational institutions were high-lighted by, Lambert and Lio (2003) and Ogwo (2004) and these findings contributed in identifying other sources of auguementing government subventions to training institutions. Also, NBTE (2002) unfolded some areas of schools expenditure which should be clear to all those interested in the educational development of the country especially at the post primary vocational level.

Technical teachersô availability in technical institution had continued to pose problems in the delivery of education and especially vocational-technical education in this country. For example, the supply of technical teachers had not met the demand of institutions in terms of quantity and quality. Ighedo (2002) found that many vocational teachers were inadequately exposed to the elementary concepts and practical skills in the technical specialty for which teacher training was received. Similarly, Ighedo (1999) reported in Shedder (2000) saying that: In the medical training schools it is very rare to find successful teachers who have not been commercially successful in medical practice; the best engineering teachers are those who have served some years at commercial work; in trades like plumbing, pattern making, etc it is generally agreed that a successful teacher must have reached a stage where profitable employment can be procured. Further, American vocational association (AVA) (2004) advised vocational institutions to seek and obtain teachers form industries because: They would be highly skilled craftsmen to whom the younger staff and students looked to for advice and help, they would probably be more matured than many beginning teachers and possessed the confidence that mastery of the subject demand, and they would be independent based on secured knowledge, practical skills and their employability outside the educational system.

It appeared that the AVA (2004) suggestions were in agreement with the NBTE (2003) which directed that only teachers who passed through the craftsmanship practical skill

training in technical colleges before obtaining higher qualifications in any specific trade would be allowed to teach NTC program in technical colleges in Nigeria, and support staff duty was to work in co-operation with teaching staff. When the NBTE fully enforced the implementation of technical teacher appointment into technical colleges to be based on the possession of a good background of craftsmanship training, trainers and trainees would start getting the best of training from their institutions. The policy of the NBTE appeared to parallel those of AVA (2004) and Ighedo (1999) with respect to the competent technical teacher availability in training institutions. When trainees received instruction with relevant infrastructural facilities, industrial employment would become more guaranteed and stable especially for craftsmen.

Need For the Possession of Good Work Attitudes by the Craftsmen.

Good work attitude is to employees and craftsmen what blood is to human beings and animals. Osuala (2003) defined ówork personalityô vis-à-vis work attitude as the characteristics pattern of work activity displayed by a person in a work situation, and that work personality incorporates work situation, and that work personality incorporates work attitude, behavioral work patterns, value system, incentives and abilities regarded as necessary to function in a work situation. Similarly, Nash (2004) reported as saying that a painter, a composer, a plumber, etc. is a man who can control his materials in producing excellent effects consistently rather than by chance. Further, Owonde (2009) revealed that intangible behaviors in vocational education are not directly observable, but have to be inferred from other behavioral manifestations such as how well adjusted the students are in terms of co-operation with fellow workers, adjusting to industrial or workshop environment; care for materials and tools, work-safety, etc. furthermore, Bruachle (2003) suggested that workers should possess certain work related skills which are not cognitive or psychomotor in nature but seem to be closely knit and include generic transferable non-technical competencies considered necessary for long term survival in the world of work.

Findings of Osuala (2003) Nash (2010) Owonde (2009) and Branchle (2003) implied that the intangible behaviorsô of workers contributed immensely in determining their success in work life. For instance, co-operation with colleagues, punctuality to work, responsibility, care for materials, tools, equipment and self are among these intangible behaviors expected of competent workers.

Affective work competencies according to Evans and Hair (2009) and Kazanas (2008) are those non-technical proficiencies needed for job success; work habits, values and attitudes

considered desirable for all workers. In the same vein, Burns (2003) and Brock (2002) found that personal traits such as inter-personal and intra-personal factors, social and personality traits were inhibitors to the progress and promotion of workers in organizations; they influence greatly the success or failure of enterprises. Employees were more likely to loose their jobs for reasons of personal qualities or general attitudes than because of lack of technical competence (Wilson, 2003).

Examining the strategies adopted by effective schools and training programs, Bellanca (2002) revealed that: Students made less mistakes on projects; Students were inspired to work as a team; There were less damages to tools and equipment; There were less disciplinary problems; There were improved curricular contents; There as enhanced staff harmony; and Students were prepared for work in a world where productivity was a survival issue.

Findings of Burns (2003), Wilson (2003), Evans (2008), Kazanas (2008), Bellanca (2002) and Brock (1999) addressed the fact that in many situations employeesô demotion or dismissal was traced to bed attitude to work rather than technical job incompetence. That meant that some workers were more likely to be retrenched or downgraded due to negative behavior at work than inability to adequately perform assigned jobs.

In comparison of adequately and inadequately trained worker, Onu (2010) found that: Well trained workers were more efficient and productive, they worked faster, understood the jobs better, made less mistakes in work, more likely to be promoted, found their work more interesting, derived more pleasure and more job satisfaction from their work, suffered less boredom and tension, they were also healthier and used expert knowledge and technical skills to establish and advance their businesses.

Examining the attitude to work of radio-television repairmen, Onu (2010) found that radio and television repayment in Nigeria: Were impatient in listening to customersô complaints about their defective electronics sets; capitalized on customersô ignorance to accept to repair electronics sets that had minor and easily correctable faults; were careless while handling customersô electronics sets; did not take adequate safety electrical accident prevention measures while at work, and were not open to customers regarding the explanation of what repairs they had done to electronic gadgets, in protection of what they regard as trade (or óprofessionalô) secrets.

In the same vein, Blank (2002) described trained workers as those who: Worked without unnecessary supervision; worked co-operatively with their colleagues; accepted supervision with positive attitude; followed accepted safety practices, left work station areas

clean and orderly; kept accurate records, dressed as required on the job, returned tools and equipment in ready-to-use condition, avoided wasting materials and supplies, attended work regularly and on time, avoided distracting other co-workers, and avoided horse playing while at work.

The differences between trained and untrained workers had been high-lighted by Blank (2002) and , Onu (2010) and their views appeared to support the existence of employersô minimum standard of on-the-job performance which must be met before awarding a pass mark to persons being trained for work of any type. Consequently, an untrained person could only attempt to meet that standard by mere trial and error.

Examining the relevance of work habits to training to work, Ezeji (2003) revealed that work habits included: Punctuality to work; good personal appearance and neatness, care of tools, machines, equipment and materials, imitative and good work judgment, co-operation and dependability, interest in work and workers; acceptance of instruction and correction, respect for the rights of other workers; confidence in oneôs ability, resourcefulness and attention to details, and ability to apply safety practices at work and outside work.

In another development, Petty (2009) identified 15 affective work competencies needed on-the-job by workers and they were: Ambition or strong desire to succeed; co-operation and helpfulness; adaptability and resourcefulness; independence and initiation; accuracy and quality of work; pleasance, friendliness and cheerfulness; responsiveness in following direction, instruction or regulation; Consideration and courteousness, Carefulness, alertness and perception; Stability of emotion and judgment; Perseverance, patience, endurance and tolerance, Neatness, orderliness, and personal appearance; Dependability, punctuality, reliability and responsibility, Efficiency, quantity of work, productiveness and swiftness; and Dedication, devotion, honesty, loyalty and consciousness.

Work ethics identified by Petter (2009) and Ezeji (2003) needed serious consideration and adoption by trainers of workers and employers of well trained employees. By integrating these suggestions in training institutions for workers, employers would in both short and long terms benefit in getting regular, efficient, dedicated, qualified and loyal work force.

On how to determine workers loyalty to employers, Aliano (2009) asked for answer to such questions as: What is the general attitude of employees towards work and the company? Are employees punctual and regular in attendance to work? Are the employees willing to go beyond the call of duty when the occasion requires it? Are the employees co-operative and enthusiastic on the job? Do employees offer and accept constructive criticism?

Are employees willing to abide by the decisions of management regarding their suggestions? Are employees willing to accept responsibilities; and Are employees sincere in their dealings with their employers and fellow employees?

Correct answers to Aliano (2009) questions regarding the place of loyalty of workers to achieving effectiveness and efficiency of work, would provide an alternative route to success in work and life. For instance, if all or most of the answers to the above eight questions were in the affirmative, the implications would be that industrial peace would prevail, employers would maximize their profits and employees would have cause to rejoice.

Dwelling on the need for the inculcation of right work attitudes to trainees prior to their employment in industries, Mordu (2003) suggested the following: Increase work performance of graduates recruits, Reduce start up costs and time spent on orientation, Reduce occupational accidents, Guarantee success at the work entry point, Reduce the amount of anxiety and factory phobia, Create traineesô confidence and assurance in the chosen career, and Reduce employeesô turnover and occupational migration.

In the same vein, Ike (2006) found that among the qualities of workers sought by employers include the ability to; Organize work, Monitor personal output, Solve work related problems, Take initiative when the need arises, Schedule work effectively, Speak and write intelligently, Follow instruction strictly, Interact with co-workers and members of the larger community, and Develop the desire to progress in life as a worker and as a good citizen.

The foregoing discussions by Mordu (2003) and Ike (2006) have serious implications to employees and employers of labour. For instance, the employees must possess good attitudes to work in order to be hired and grow in the work. Most of these qualities are highly needed at the entry points as well as the workers acquired experience on the job.

Theoretical framework for the study.

Theoretical framework for this study is based on the social cognitive development theories by Bandura (1986), job-matching theory and human capital development theories. Social cognitive development theory (Ogbeide, 2006) which has to do with studentsô feelings regarding their ability to perform academic tasks (self-efficacy beliefs), predict their ability to achieve the tasks. Social cognitive theorist such as Bandura also asserted that both reinforcement and punishment influence learning behavior in several ways. One of such is how expectations about probable future consequences affect how people cognitively process

new information (Ormrod, 2003). According to the social cognitive development theory, when we believe that we will be reinforced for learning something, we are more likely to pay attention to it and mentally process it in an effective fashion. When we donôt expect to be reinforced for learning it, we are far less likely to think about or process it in a moderate way (Ormrod, 2003). Reflecting on this theory, it can be asserted that student learn many things that they never express because there is no reinforcement for expressing them. Furthermore, on this theory, it could be argued that on one hand, many of employability and general work skills that are not typical technical skills could be undermined by students if they are not directly tested or evaluated on the skills (extrinsic reinforcement), and/or if they are not intrinsically motivated to master those skills for future use. On the other hand, students could be very competent on performing some employability skills and general work skills if they are tested or evaluated on those skills, if their grades are affected by those skills (extrinsic reinforcement) and/or if they are intrinsically motivated to master those skills for future use (Ogbeide, 2006).

On the job-matching theory of turnover, this theory was proposed by Javanovic (1979) which stated that if a person can learn through specific experience how suited he is in a job, then an eventually decreasing hazard records arise from the optimal decision rule. Intuitively, the more the experience a person has in a job, the better the assessment of his competence, so the less new information will affect this assessment and prompt the individual to leave it.

Miller (2007) in explaining the concept of job-matching model, stated that a Bayesian decision maker combines prior information about each jobôs characteristics with sample information he has accumulated from working experience on that job in order to forecast its future returns (both pecuniary and unpecuniary). Jovanovic (1979) and Shultz (1975) noted women, young workers, production workers, those with less schooling and those in the private sector tend to turn-over more, as do those workers not covered with by the pension plan and those who work in industries with lower concentration ratios or with smaller average firm size. The theory of job-match and turn-over predicts that workers remain on jobs in which their productivity is revealed to be relatively high and that they select themselves out of jobs in which their productivity is revealed to be low. This theory is related to this study or has implications to this study, if there is a specific job-match for the electrical/electronic student, the rate at which they learn the employability skills or imbibe the employability and general work skills will be high. This means there will be a correlation between job-match and employability. Consequently, turn-over will be greatly improved i.e.

job-matching is a major source of workers turnover.

The economic prosperity and functioning of a nation depends on its physical and human capital stock. Human capital theory rests on the assumption that formal education is highly instrumental and ever necessary to improve the production capacity of a nation (Shultz 1971). According to Olaniyan & Okemakinde (2008), human capital theory emphasizes how education increases the productivity and efficiency of workers by increasing the cognitive stock of economically productive human capability which is a product of innate abilities and investment in human beings. The provision of formal education is seen a productive mechanism/investment in human capital, which the proponent of the theory have considered as equally or even more worthwhile than that of physical capital.

According to Babalola (2003), the rationality behind investment on human capital is based on three arguments:

i. That the new generation must be given the appropriate parts of the knowledge which has already been accumulated by previous generations;

ii. That the new generation should be taught how existing knowledge should be used to develop new products, to introduce new processes production methods and social services; and; iii. That people must be encouraged to develop entirely new ideas, products, processes and methods through creative approaches. Fagerlind & Saha (1997) posits that human capital theory provides the basic justification for large public expenditure on education both in developed and developing nations and equally asserts that:

i. the cost of education should be borne by the beneficiary or recipient by means family assistance or self-help schemes. ii. The educational requirement for particular jobs should not be exaggerated. iii. Wage structure should be tied to occupational requirements rather than educational attainments.

In the view of Xiao (2001), human capital theory suggests that education or training raises the productivity of workers by imparting useful knowledge and skills, hence raising workers future income by increasing their lifetime earnings, and also draws a distinction between general educations (employability) and firm specific training (general work skills).

Human capital theory is related to this study in such a way that in any investment on the students training either on employability skills or on the general work skills will boost or

enhance productivity of the graduates at work stations and consequently increases their wages and enhances output of production or their rate of turn-over.

Review of Related Empirical Studies.

Robinson, (2006), conducted a study on the graduates and employers perceptions of entry level employability skills needed by agriculture, food and Natural Resources graduates. Nine research questions were developed in line with the objective or the purpose of the study. Questionnaire was employed as an instrument for data collection from the respondents. Mean and standard deviations were used to analyze the research questions formulated for the study. It was found out from the study that 67 employability skills were ranked in order of importance based on their mean importance and consequently were all considered as very important and graduates should be competent in performing each of the activities. It was also found out from the study that some graduates perceived themselves as best competent at performing all 67 employability skills. It was further recommended that the College of Agriculture, Food and Natural Resources should address the problem of solving skills deficiency. It was also recommended that the faculty members should find ways of incorporating the identified employability skills into the curriculum to increase the employability of the graduates.

Wyes, and Lim, (2009) conducted a study on the perception of differential between employers and undergraduates on the importance of employability skills. The study attempts to investigate as the major objective of the study if the undergraduatesô core competencies are able to meet with the requirements set by the employers and to analyze the effectiveness of personal qualities and employability skills development in private University in Malaysia. Questionnaires Survey means sure comparison, and independent sample t-test is used to capture the perception differential between 30 employers and 600 undergraduates from a local private University on the importance of employability skills. Findings of the study showed that the undergraduates are all highly competent in possessing the said personal qualities and skills. However, such skills as critical analysis, planning, problem solving oral communication, decision making and negotiating report a slightly higher level of mismatch between employers and undergraduates perception on their importance and development in the University.

Hoo,; NaSurdin, ; Chain, & Ignatius, (2009) conducted a study on Employers perception/preference for foreign trained graduates. The purpose of the study was to examine (1) whether employers prefer foreign trained graduates (FG) vis-a-avis local graduates (LG)

and graduate from local twinning program (TG) and 9ii) whether there is a significant difference in the overall performance perception (OPP) of these 3 groups of graduates, over different time frame. Data was collected from Human Resources Managers, Administrative Managers, of Public listed companies as well as from small and medium Enterprises in the northern region of Malaysia, using an on-line survey. Findings from the study revealed that employers perceived foreign trained graduates to be superior in terms of employability skills such as communication skills (verbal & written), confidence / self wage, computer / IT skills; creative / inoperative skills; and analytical skills and flexibility / adaptability compared to their local counter parts. In terms of overall performance perception (OPP), foreign graduates too were deemed superior.

Graham, (2003) conducted a study on the employer perception of the preparation of agricultural and extension education graduates. The major purpose of the study was to determine knowledge, skills and abilities desired of employers of entry level graduates of the department of Agricultural and Extension Education, five research questions were also formulated in line with the specific purposes of the study to guide the study. The population for the study consisted of entry level graduate from the Department of Agricultural and Extension Education (AEED) from 1996 to 1999 and 37 different employers representing public schools, government agencies, Banks and agricultural business. The survey instrument was a self-administered questionnaire adapted from other studies used at land Grant Institutions.

For the analysis of the study the mean score were calculated and responses to importance of life experiences and future trends were ranked. Some of the findings of the study revealed that the level of preparation of AEED graduates from on entry-level knowledge, skills and abilities that included interpersonal skills, communication skills, computer skills, character skills and technical competencies, employer felt that the graduates were not best prepared. Based on the findings from the study, it was recommended that the department should explore the adoption of senior projects, colloquia, or other avenue to acquire skills in communication, problems solving and decision making. Incorporate the use of computer skills with rare course assignments and continue to administer employer and alumni studies for feedback.

Husain, Mokhtar, Ahmad, & Mustapha, (2010) conducted a study on: The importance of employability skills from employers perspective. The study was conducted to explore the importance of employability skills of engineering graduates through employersô perspective. The respondents consisted of 180 employers in various fields of engineering in peninsular,

Malaysia. The instrument used for the study was adapted from the SCANS model. The findings show that the employers put high level of interests in employability skills as must have skills from graduate. The study also showed no significant difference between the size of company and employability skills. It was recommended based on the study that authorities of educational institution should enhance the employability skills of the students either through the professional development of lecturers, curriculum and co-curriculum.

Ismail, Yusuf & Sing (2010) carried out a research on the Employers perception on graduates in Malaysian service sector. The main purpose of the study was to get the perception of employers in service sector on graduatesô performances. Service sector was selected as a focus of the study for it has become the main sector in the country. A total 749 employers in the Service Sector were involved on the study. The questionnaires were distributed to employers and human resource managers and heads of other departments/units in the organization in 2009 and 2010. The difference in the mean attained by graduates from the University of Kebangasaan, Malaysia (UKM), graduates from other local institutes of higher education and graduates from overseas were tested and compared. The findings showed that respondents give moderate scores to all the graduates. It also shows that graduates preferences were good but not satisfying and not the best, some weakness among graduates from UKM and other local & overseas institutes of higher education have been recognized from comparing mean scores. It was recommended that institute of higher learning need to work hard to improve the ability and employability of their graduates in the job market.

Summary of Review of Related Literature

The major objective of technical education at the College of Education (Technical) level is to train and impart the necessary knowledge and practical skills leading to the production of craftsmen and technicians who will be enterprising and self-reliant. College of Education (Technical) graduates employed as craftsmen in industries need to possess work potentials that employers demand on first employment in industries.

The production of craftsmen by technical colleges should be based on the needs of employers like industries. Consequently, the curriculum content should be directly related to what industries, firms and businesses need to make the graduates easily employable.

In the trade theory lessons, instructors applied the principles and concepts in solving trade science and calculation problems while teaching their students. Key points, facts and

concepts needed by the students to master the occupation are stressed, and instruction is of sufficient depth and breadth to produce well-trained and competent craftsmen.

The possession of practical skill competencies by craftsmen is a necessity for applied scientific training to yield optimal results. Practice can only be learned by practice; hence a very serious attention should be given to its acquisition by training institutions for craftsmen.

Industries need craftsmen who possess good work attitudes which are not directly cognitive or psycho-motor in nature but which include generic transferable non-technical competencies considered essential for long term survival of workers; friendliness; carefulness; perseverance, tolerance, orderliness, punctuality, honesty and loyalty, to name a few. From the summarized literature review; it has become clearer that Colleges of Education (Technical) programs will only be relevant to the extent that the graduates possessed the theoretical knowledge and practical skill competencies as well as work attitudes needed for optimal performance of craftsmen in industrial or self employment.

CHAPTER THREE

METHODOLOGY

This chapter presents the procedure for carrying out the study under the following sub-headings: Design of the study; Area of the study; Population of the study; Sample and sampling techniques; Instrument for data collection; Validation of the instrument; Reliability of the instrument; Method of data collection and Method of data analysis.

Design of the Study

The design of this study is survey research design. The purpose of survey research design is to gather data from groups of people by way of questionnaires (Ary, Jacobs & Razavich, 2002). Gall, Gall and Borg (2007) stated that the purpose of a survey is to use questionnaires or interviews to collect data from a sample that has been selected to represent a population to which the findings of the data analysis can be generalized.

Survey research can be used to assess needs. Gall et al., (2007) stated that needs assessment research is used to measure the precise extent of discrepancy between an existing state and a desired state. For a needs assessment to occur, a dear and obvious need has to be identified. Upon identifying a need, judgment can be made as to what exists and what is desired. The survey design was adopted for this study because the design will be used to collect and analyze data from employers of graduates of Electricity and Electronics of Federal College of Education (Technical) Bichi through their industrial supervisors who are the representatives of the population.

Area of the Study

The study was carried out in Kano State. Kano State is considered suitable for the study because of the number of industries located in and around Kano and some of which employ the graduates of Electricity/Electronics program of the Federal College of Education (Tech.) Bichi, Kano.

Population of the Study

The population for this study comprised all the currently registered 538 small-scale, medium-scale and large-scale privately and publicly-owned industries and establishments in Kano State known to the researcher.

Sample and Sampling Technique.

Proportionate and simple randmpling techniques were used to select 93

supervisors that will constitute the respondents for the study. This comprised 68 and 25 supervisors from private and government-owned industries and establishments respectively that are operational in Kano State and subsequently employing graduates of Electricity/Electronics program of Federal College of Education (Technical) Bichi, Kano State. From each of the randomly selected companies or establishments, one supervisor was selected to respond to the instrument (See Appendix I).

Instrument for Data Collection

A structured questionnaire instrument was used for data collection. The items in the questionnaire were generated and developed as a result of an extensive review of literature.

The instrument contained two parts A and B. Part A was made to elicit personal data from the respondents while part B was further divided into four sections (i), (ii), (iii) and (iv) in line with the four research questions that were answered by the study. Section (i) has 32 items which asked questions regarding the employers assessment of the general work skills possessed by Electricity/Electronics graduates. Section (ii) has 28 items which sought answers on the employersô assessment of the technical/ practical skills possessed by the Electricity/Electronics graduates. Section (iii) has 17 items which posed questions with respect to the employersô assessment of the work attitudes possessed by the Electricity/Electronics. Section (iv) has 10 items, which raised questions on the ways through which the skills of student of Electricity/Electronics program could be improved to enable them to be relevant to the needs of the employers in Kano State.

All respondents were required to respond to the questionnaire instrument to indicate their opinion on a-four-point rating scale for section A, B and C as follows: Highly possessed, Moderately possessed, Poorly possessed and Not possessed. For Section D, the responses were: Strongly Agree, Agree, Disagree and Strongly Disagree.

Validation of the Instrument

The instrument for data collection which is the questionnaire was subjected to face validation by three experts from the Department of Vocational Teacher Education, University of Nigeria, Nsukka. The experts were provided with the specific research objectives and research questions formulated for the study and were requested to examine each item in the instrument as to whether or not the items were relevant, clearly stated, unnecessary ambiguity

and capable of eliciting the correct responses. The suggestions and corrections made by the experts were incorporated into the final copy of the instrument.

Reliability of the Instrument

To determine the reliability of the instrument, a pilot test was conducted in Delta State at the Asaba industrial layout, using 15 supervisors of both government and private-owned establishments that employ graduates of Electricity/Electronics programs of Federal College of Education (Technical), Asaba. For the purpose of obtaining the internal consistency of the instrument, Cronbach Alpha reliability method was used and Cronbach alpha coefficient of 0.925 was obtained (see Appendix V), this represents the reliability coefficient of the research instrument. The co-efficient was high and positive which indicated that the instrument was reliable in measuring what it was purported to measure.

Method of Data Collection

The instruments were administered by hand to the supervisors of industries or establishments employing the graduates of Electricity/Electronics program of Federal College of Education (Technical), Bichi through personal contacts. This was also achieved with the assistance of three other research assistants who are employees of some of these industries. The research assistants were at least holders of NCE (Technical), and indigenes of the zones under their respective coverage for data collection. These research assistants were adequately oriented on the completion of the instrument before they received some copies of the instrument for distribution and collection. The researcher visited some of the establishments during the data collection to coordinate and monitor the whole data collection exercise. The copies of the questionnaire were retrieved from the respondents by the research assistants and were collated by the researcher after two weeks of administration for data analysis.

Method of Data Analysis

Data collected from the study was analyzed using mean and standard deviation to answer the research question while t-test statistics was used for testing the hypotheses at 0.05 level of significance and obtained degree of freedom. The scaling points for the upper and lower limits of the mean were shown below:

For Sections A, B and C:

3.50	ï	4.00	ï	Highly Possessed	(HP)
2.50	ï	3.49	ï	Moderately Possessed	(MP)

1.50	ï	2.49	ï	Poorly Possessed	(PP)
1.00	ï	1.49	ï	Not Possessed	(NP)

Section D:

3.50	ï	4.00	ï	Strongly Agree	(SA)
2.50	ï	3.49	ï	Agree	(A)
1.50	ï	2.49	ï	Disagree	(D)
1.00	ï	1.49	ï	Strongly Disagree	(SD)

For sections A, B, and C any skill item that has a mean score of 2.50 and above was regarded as ñPossessedò while skill items with mean values of less than 2.50 were regarded as ñNot Possessedò by graduates of Federal College of Education (Technical) Bichi. On the other hand, in section D, any skill item that has a mean score of 2.50 and above was regarded as ñAgreedò while skill items with mean values of less than 2.50 were regarded as ñDisagreeò.

The four null hypotheses were tested using t-test statistics @ 0.05 level of significance and at 91 degree of freedom to determine the acceptance or rejection of null hypotheses. The null hypothesis of no significant difference was accepted for all the four hypotheses whose t-cal values were less than the t-tab of 1.96 at $P<0.05$ level of significance and at 91 degree of freedom.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

This chapter deals with the analysis and presentation of the data collected for the study. The data are used for answering the research questions and testing the hypotheses for the study.

Research Question 1

What are employersô assessments of the general work skills possessed by graduates of electricity/electronics program of Federal College of Education (Technical) Bichi?

The data for answering the research question 1 are presented in Table 1.

Table 1: Responses of supervisors of private and government establishments on general work skills possessed by the graduates of electricity/electronics programs (N=93)

S/N	Item Statements	$\overline{X}$	SD	Remarks
1	Identifying essential components of a problem	2.25	1.069	**Not Possessed**
2	Making decisions on the basis of thorough analysis of the situation	2.49	1.038	**Not Possessed**
3	Recognizing the effects of decisions made	2.17	1.069	**Not Possessed**
4	Assigning/delegating responsibility	2.38	0.988	**Not Possessed**
5	Allocating time efficiently	2.53	0.685	**Possessed**
6	Meeting deadlines	2.72	0.851	**Possessed**
7	Taking reasonable job-related risks	2.66	0.949	**Possessed**
8	Identifying potential negative outcomes when considering a risky venture	2.30	0.882	**Not Possessed**
9	Monitoring progress toward objectives in risky ventures	2.34	0.866	**Not Possessed**
10	Conveying information one-to-one	2.55	0.961	**Possessed**
11	Communicating ideas verbally to groups	2.86	0.829	**Possessed**
12	Making effective business presentations	2.01	0.617	**Not Possessed**
13	Writing reports	1.91	0.868	**Not Possessed**
14	Writing external business communication	2.03	0.865	**Not Possessed**
15	Writing internal business communi	2.39	0.678	**Not Possessed**

16	Using proper grammar, spelling, & punctuation	2.41	0.711	**Not Possessed**
17	Listening attentively	3.05	0.697	**Possessed**
18	Working well with fellow employees	3.30	0.639	**Possessed**
19	Relating well with supervisors	3.16	0.824	**Possessed**
20	Establishing good rapport with subordinates	3.24	0.786	**Possessed**
21	Identifying sources of conflict among people	2.45	0.915	**Not Possessed**
22	Resolving conflicts	2.27	0.934	**Not Possessed**
23	Supervising the work of others	2.46	0.815	**Not Possessed**
24	Delegating work to subordinates	2.67	0.742	**Possessed**
25	Coordinating the work of subordinates	2.61	0.944	**Possessed**
26	Providing novel solutions to problems	2.11	0.832	**Not Possessed**
27	Adapting to situations of change	3.01	0.853	**Possessed**
28	Initiating change to enhance productivity	2.30	0.894	**Not Possessed**
29	Keeping up-to-date with external realities related to your companyôs success	2.39	0.847	**Not Possessed**
30	Maintaining a positive attitude	2.98	0.944	**Possessed**
31	Functioning well in stressful situations	2.34	0.878	**Not Possessed**
32	Ability to work independently	2.25	0.996	**Not Possessed**

Note: $\overline{X}$ = Mean.
SD = Standard Deviation.
N = Number of Respondents.

Data presented in Table 1 above showed that the mean ratings of the responses of the respondents on 13 out of the 32 general work-skill items had mean values which ranged from 2.53 to 3.30 which are greater than the cut-off point value of 2.50 on a 4-point rating scale. The above findings indicated that the supervisors of both private and public establishments agreed that the graduates of electricity/electronics programs of Federal College of Education (Technical) Bichi possessed those 13 identified general work skill items.

On the other hand, Table 1 showed further that, the mean ratings of the responses of the respondents on the remaining 19 work-skill items had mean values which ranged between 1.91 to 2.49 which are all less than the cut-off point value of 2.50 on a 4-point rating scale. The above findings implied that the supervisors of both private and public establishments

agreed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi do not possess those 19 identified general work-skill items for work on graduation in Kano State. The data presented in the table also revealed that the standard deviation values for all the 32 work-skill items were less than 1.96 which implied that the responses of the respondents are close to the mean and to one another in their responses.

In summary, the above findings on the general work skills possessed by the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State showed that they do not have enough general work skills. This is because, the graduates possessed only 13 out of the identified 32 general work skills; while the remaining 19 general work skills required by the graduates were not possessed.

Research Question 2

What are employersô assessments of the practical/technical skills possessed by graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State?

The data for answering the research question 2 are presented in Table 2.

Table 2: Responses of supervisors of private and government establishments on practical/technical skills possessed by the graduates of electricity/electronics program (N=93)

S/N	Item Statements	$\overline{X}$	SD	Remarks
33	Interpret a simple electric circuit diagram: Units of current, voltage, resistance power Ohmôs law and Kirchhoffôs laws.	2.80	0.841	**Possessed**
34	Understand electromagnetism: Magnetic flux, force on current-carrying conductors, electromagnetic induction, Flemingôs right hand rules and Lenzôs Law.	2.34	1.005	**Not Possessed**
35	Understand the inductance in a d.c. circuit: Self inductance, inductive and non inductive circuits and units of inductance.	2.35	1.146	**Not Possessed**
36	Understand electrostatics: Structure of atom, electric charges, movement of electrons in a conductor, electrostatic units, capacitors in series and parallel.	2.46	0.962	**Not Possessed**
37	Understand the d.c. machines: Equation, armature reaction and efficiency of d.c. machines.	2.45	0.730	**Not Possessed**
38	Understand d.c. Motors: Speed and torque characteristics, starting speed, d. c. motor control and applications.	2.41	0.710	**Not Possessed**
39	Understand d. c. generators; Method of excitation, open circuit characteristics, load characteristics of series and	2.25	0.855	**Not Possessed**

	shunts generators.			
40	Understand the generation of alternating e.m.f: Average and r.m.s values	2.39	0.885	**Not Possessed**
41	Understand electrical circuits: Single phase, two phase and three phase circuits, circuits with R, Land C series & parallel	2.34	0.866	**Not Possessed**
42	Understand transformers: Transformer action, transformer tests, the voltage regulations, autotransformers, three phase transformers.	2.55	0.961	**Possessed**
43	Understand electrical-electronics measurements: Moving coil iron, thermocouple, ammeters, volt-meters, watt-meters, ohmmeter and potentiometer.	2.46	0.618	**Not Possessed**
44	Understand semi-conductor devices: Atomic structure, covalent bonds, n-type, p-type and semi-conductors.	1.92	0.576	**Not Possessed**
45	Understand electrolysis: Primary and secondary cells, simple voltaic cells, leclanche cell, mercury cells, characteristics of lead-acid and alkaline cells.	2.41	0.711	**Not Possessed**
46	Understand the field-effect transistors: the junction-field effect transistors, the metal oxide semi-conductor field effect transistor, static characteristics and integrated circuits.	2.47	0.716	**Not Possessed**
47	Understand amplifiers: Small-signal audio frequency amplifiers, negative feedback amplifiers, audio frequency power amplifiers and tuned amplifiers.	2.13	0.726	**Not Possessed**
48	Design electrical circuit drawing for installation of required points of light: in series and parallel connections	2.52	0.618	**Possessed**
49	Produce electric cable jointing: T-joints, married joints and Britannic joints.	2.74	0.569	**Possessed**
50	Install domestic electrical appliances: energy meters, protection devices, fuzes and switches.	3.18	0.658	**Possessed**
51	Install final sub-circuits: including earth continuity conductors to the general mass of the ground.	2.79	0.841	**Possessed**
52	Install conduit wiring: in domestic and commercial houses using pipes buried in walls and floors.	2.68	0.874	**Possessed**
53	Install surface wiring: in domestic and commercial houses using required switches, fuzes, points of light and cable joints in series and parallel connections.	2.85	0.820	**Possessed**
54	Install trucking or duct electrical wiring containing many wires at a time trunking: in series and parallel connections.	2.39	0.886	**Not Possessed**
55	Install extension board electrical wiring: for use in domestic and commercial appliances.	2.73	0.677	**Possessed**
56	Install d.c. machines and d.c. generators: in series and parallel connections.	2.47	0.829	**Not Possessed**
57	Rectify faults in d.c. appliances: d.c. electric machines, d.c. electric motors and d.c. electric generators.	2.61	0.944	**Possessed**

58	Install domestic electrical appliances: Gold leaf circuits electroscopes, simple electric cookers and circuit alarm bells.	2.43	0.802	**Not Possessed**
59	Install electronic amplifiers: Simple amplifiers, audio amplifiers, and wide band amplifiers.	2.39	0.723	**Not Possessed**
60	Rectify faults in: transistor circuits, integrated circuits, and semi-conductors.	3.05	0.578	**Possessed**

Note: $\overline{X}$ = Mean.
SD = Standard Deviation.
N = Number of Respondents.

From the data presented in Table 2 above, it was revealed that the mean ratings of the responses of the respondents on 11 out of the 28 practical/technical skill items had mean values which ranged from 2.52 to 3.18 which are greater than the cut-off point value of 2.50 on a 4-point rating scale. The above findings indicated that the supervisors of both private and public establishments agreed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State possessed those 11 identified practical/technical skills for work on graduation.

On the other hand, Table 2 further revealed that, the mean ratings of the responses of the respondents on the remaining 17 practical/technical skills had mean values ranging between 1.92 to 2.47 which are all less than the cut-off point value of 2.50 on a 4-point rating scale. The above findings showed that the supervisors of both private and public establishments agreed that the graduates of electricity/electronics programs of Federal College of Education (Technical) Bichi, Kano state do not possess those 17 identified practical/technical skills for work on graduation. The data presented in the table also revealed that the standard deviation values for all the 28 practical/technical skill items were less than 1.96 which implied that the responses of the respondents are close to the mean and to one another in their responses.

In summary, the above findings on the practical/technical skills possessed by the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State showed that they do not have enough practical skills. This is because, the graduates possessed only 11 out of the identified 23 practical/technical skills; while the remaining 17 practical/technical skills required by the graduates were not possessed.

Research Question 3

What are employersô assessments of the work attitudes possessed by graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State?

The data for answering the research question 3 are presented in Table 3.

Table 3: Responses of supervisors of private and government establishments on work attitude possessed by the graduates of electricity/electronics program (N=93)

S/N	Item Statements	$\overline{X}$	SD	Remarks
61	Attendance to work regularly, on time and willing to go beyond the call of duty when the occasion demands.	2.32	0.862	**Not Possessed**
62	Organization in work, monitoring of personal output and solution of work related problem.	2.82	1.010	**Possessed**
63	Working without unnecessary supervision and accepting genuine criticism from supervisors.	2.24	0.914	**Not Possessed**
64	Co-operative with their supervisors, colleagues and constituted authority.	2.25	0.996	**Not Possessed**
65	Perseverance, patience, endurance, tolerance and loyalty to employers.	3.12	0.919	**Possessed**
66	Following accepted safety practices for self, co-workers, equipment and facilities.	2.17	1.059	**Not Possessed**
67	Keeping work station areas clean, orderly and leaving it in a ready-to-use condition.	2.43	1.164	**Not Possessed**
68	Keeping accurate records of supplies: tools, machines, equipment and monies.	2.47	0.939	**Not Possessed**
69	Willing to accept responsibilities and accountable for actions taken	2.29	0.867	**Not Possessed**
70	Dressing as required on the job, presenting good personal appearance and neatness.	2.92	0.912	**Possessed**
71	Returning of tools, machines and equipment in ready-to-use condition.	2.60	1.065	**Possessed**
72	Avoidance of wasting time, materials and supplies.	2.22	0.858	**Not Possessed**
73	Good work adjustment, reduction of anxiety and factory phobia.	2.34	0.866	**Not Possessed**
74	Interest in work, workers and respect for the right of other workers.	2.30	1.050	**Not Possessed**
75	Acceptance of instruction, correction, direction and regulations.	2.39	0.885	**Not Possessed**

76	Development of self-confidence, resourcefulness and attention to details.	2.28	0.889	**Not Possessed**
77	Accuracy and quality of work, productiveness and efficiency in work.	1.96	0.977	**Not Possessed**

Note: $\overline{X}$ = Mean.
SD = Standard Deviation.
N = Number of Respondents.

Data presented in Table 3 above showed that the mean ratings of the responses of the respondents on 4 out of the 17 work attitude items had mean values which ranged from 2.60 to 3.12 which are greater than the cut-off point value of 2.50 on a 4-point rating scale. The above findings indicated that the supervisors of both private and public establishments agreed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State possessed those 4 identified work attitude skills.

On the other hand, Table 3 showed further that, the mean ratings of the responses of the respondents on the remaining 13 work attitude items had mean values which ranged between 1.96 to 2.17 which are all less than the cut-off point value of 2.50 on a 4-point rating scale. The above findings implied that the supervisors of both private and public establishments agreed that the graduates of electricity/electronics programmes of Federal College of Education (Technical) Bichi kano State do not possess those 13 identified work attitude skills for work on graduation. The data presented in the table also revealed that the standard deviation values for all the 17 work-skill items were less than 1.96 which implied that the responses of the respondents are close to the mean and to one another in their responses.

In summary, the above findings on the work attitudes possessed by the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State showed that they do not have adequate work attitude. This is because, the graduates possessed only 4 out of the identified 17 work attitudes; while the remaining 13 work attitudes required by the graduates were not possessed.

Research Question 4

What are the ways through which the skills of the students of electricity / electronics of Federal College of Education (Technical) Bichi Kano State could be improved upon to enable them to be relevant to the needs of employers?

The data for answering the research question 4 are presented in Table 4.

Table 4: Responses of supervisors of private and government establishments on the ways through which the skills of the students of electricity / electronics could be improved upon to enable them be relevant to the needs of employers

(N=93)

S/N	Item Statements	$\overline{X}$	SD	Remarks
78	Through the Student industrial work Experience Scheme (SIWES)	3.71	0.543	**Agreed**
79	Through the student professional internship	3.49	0.701	**Agreed**
80	Through the industrial Attachment Training (IT)	3.50	0.544	**Agreed**
81	Through Field Trip/Excursion to relevant industries	3.66	0.542	**Agreed**
82	Partnership between the school/college and the industries in terms of Tools/Equipment provision and skill training and exposure	3.56	0.499	**Agreed**
83	Through cooperative Education between the school/college and the industries.	3.41	0.494	**Agreed**
84	Soliciting for grants from relevant granting bodies for tools/equipment provision and training and procurement.	3.65	0.542	**Agreed**
85	Making the students to construct practical project/assigning practical projects to students.	3.60	0.534	**Agreed**
86	Making arrangements for resource persons in relevant areas to give lectures/training on skill acquisition.	3.73	0.469	**Agreed**
87	Engaging the students from another institution to come and share experience in form of Networking.	3.53	0.501	**Agreed**

Note: $\overline{X}$ = Mean.
SD = Standard Deviation.
N = Number of Respondents.

From the data presented in Table 4 above, it was revealed that the mean ratings of the responses of the respondents on all the ten (10) ways through which the skills of the graduates could be improved had mean values ranging between 3.41 to 3.73 which are greater than the cut-off point value of 2.50 on a 4-point rating scale. The above findings indicated that the supervisors of both private and public establishments agreed that the skills of the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State could be improved through those 10 identified ways. The data presented in the table further showed that the standard deviation values for all the 10 items in the table

were less than 1.96 which implied that the responses of the respondents are close to the mean and to one another in their responses.

Testing of Hypotheses

Hypothesis 1:

There is no significant difference on the mean responses of supervisors of private-owned and public establishments on general work skills possessed by the graduates of electricity/electronics program of Federal College of Education (Technical), Bichi.

The data for testing hypothesis 1 are presented in table 5.

Table 5

The t–test Analysis of the Mean Ratings of the Responses of supervisors of privately-owned and public establishments on general work skills possessed by the graduates of electricity/electronics programs of Federal College of Education (Technical), Bichi.

		Sup of Private N = 68		Sup of Public N = 25			
S/N	**Item Statements**	**X_1**	**SD_1**	**X_2**	**SD_2**	**t-Cal**	**Decision**
1	Identifying essential components of a problem	2.25	1.056	2.24	1.128	0.040	**Not Sig.**
2	Making decisions on the basis of thorough analysis of the situation	2.43	1.069	2.68	0.945	-1.044	**Not Sig.**
3	Recognizing the effects of decisions made	2.22	1.048	2.04	1.135	0.720	**Not Sig.**
4	Assigning/delegating responsibility	2.48	0.969	2.08	0.996	1.774	**Not Sig.**
5	Allocating time efficiently	2.54	0.700	2.48	0.653	0.398	**Not Sig.**
6	Meeting deadlines	2.66	0.839	2.88	0.881	-1.097	**Not Sig**
7	Taking reasonable job-related risks	2.81	0.885	2.24	1.011	2.643	**Sig.**
8	Identifying potential negative outcomes when considering a risky venture	2.25	0.870	2.44	0.916	-0.920	**Not Sig.**
9	Monitoring progress toward objectives in risky ventures	2.29	0.864	2.48	0.875	-0.917	**Not Sig.**
10	Conveying information one-to-one	2.56	0.983	2.52	0.918	0.172	**Not Sig.**
11	Communicating ideas verbally to groups	2.90	0.831	2.76	0.830	0.705	**Not Sig.**
12	Making effective business presentations	2.01	0.657	2.00	0.500	0.101	**Not Sig.**
13	Writing reports	1.91	0.876	1.92	0.862	-0.040	**Not Sig.**
14	Writing external business communication	2.09	0.841	1.88	0.927	1.029	**Not Sig.**
15	Writing internal business communication	2.40	0.672	2.40	0.707	-0.018	**Not Sig.**
16	Using proper grammar, spelling, & punctuation	2.44	0.677	2.32	0.802	0.727	**Not Sig.**
17	Listening attentively	2.95	0.700	3.32	0.627	-1.283	**Not Sig.**
18	Working well with fellow employees	3.31	0.629	3.2	0.678	0.192	**Not Sig.**
19	Relating well with supervisors	3.29	0.713	2.80	1.000	2.644	**Sig.**

20	Establishing good rapport with subordinates	3.16	0.803	3.44	0.711	-1.525	**Not Sig.**
21	Identifying sources of conflict among people	2.47	0.905	2.40	0.957	0.328	**Not Sig.**
22	Resolving conflicts	2.13	0.928	2.64	0.860	-2.382	**Not Sig.**
23	Supervising the work of others	2.53	0.819	2.28	0.791	1.313	**Not Sig.**
24	Delegating work to subordinates	2.60	0.794	2.84	0.553	-1.372	**Not Sig.**
25	Coordinating the work of subordinates	2.57	0.966	2.72	0.890	-0.661	**Not Sig.**
26	Providing novel solutions to problems	2.04	0.854	2.32	0.748	-1.425	**Not Sig.**
27	Adapting to situations of change	3.03	0.845	2.96	0.888	0.346	**Not Sig.**
28	Initiating change to enhance productivity	2.24	0.865	2.48	0.962	-1.172	**Not Sig.**
29	Keeping up-to-date with external realities related to your companyôs success	2.26	0.784	2.72	0.936	-0.353	**Not Sig.**
30	Maintaining a positive attitude	3.10	0.883	2.64	1.036	2.137	**Sig.**
31	Functioning well in stressful situations	2.28	0.878	2.52	0.871	-1.173	**Not Sig.**
32	Ability to work independently	2.15	0.966	2.52	1.045	-1.614	**Not Sig.**

Key: **X_1 =** Mean of Supervisors of Private Establishment
X_2 = Mean of Supervisors of Public Establishment
SD_1 = Standard Deviation of Supervisors of Private Establishment
SD_2 = Standard Deviation of Supervisors of Public Establishment
DF = Degree of Freedom (68 + 25 = 93 ï 2 = 91)
t- table (critical) value = 1.96
Level of Significance = 0.05

Data presented in Table 5 above revealed that 29 out of 32 general work skill items possessed by graduates of electricity/electronic program of Federal College of Education (Technical) Bichi, Kano State had their calculated t-values ranged from -0.614 to 1.774 which were less than t-table value of 1.96 (two tailed test) at PÒ0.05 level of significance and at 91 degree of freedom (df). This indicated that there were no significant differences in the mean ratings of the responses of the two groups of respondents (Supervisors of private and public establishments) on the 29 general work skill items possessed by the graduates. Therefore, the null hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents on the 29 items was upheld.

The data also showed further that the remaining three items, specifically items 7, 19 and 30 had t-calculated values of 2.643, 2.644 and 2.137 respectively which were all greater than t-table value of 1.96 (two tailed test) at PÒ0.05 level of significance and at 91 degree of freedom (df). This indicated that there was significant difference in the mean ratings of the responses of the two groups of respondents on the three general work skill items possessed by graduates of electricity/electronics program of Federal College of Education (Technical)

Bichi, Kano State. Based on this result, the null hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents on the three items was rejected.

Hypothesis 2

There is no significant difference on the mean responses of supervisors of private-owned and public establishments on practical/technical work skills possessed by the graduates of electricity/electronics program of Federal College of Education (Technical), Bichi.

The data for testing hypothesis 2 are presented in table 6.

Table 6

The t–test Analysis of the Mean Ratings of the Responses of supervisors of privately-owned and public establishments on practical/technical work skills possessed by the graduates of electricity/electronics programs of Federal College of Education (Technical), Bichi.

		Sup of Private N = 68		Sup of Public N = 25			
S/N	**Item Statements**	**X_1**	**SD_1**	**X_2**	**SD_2**	**t- Cal**	**Decision**
1	Interpret a simple electric circuit diagram: Units of current, voltage, resistance power Ohmôs law and Kirchhoffôs laws.	2.88	0.801	2.56	0.916	1.654	**Not Sig.**
2	Understand electromagnetism: Magnetic flux, force on current-carrying conductors, electromagnetic induction, Flemingôs right hand rules and Lenzôs Law.	2.32	1.042	2.40	0.912	-0.324	**Not Sig.**
3	Understand the inductance in a d.c. circuit: Self inductance, inductive and non inductive circuits and units of inductance.	2.35	1.142	2.32	1.180	0.122	**Not Sig.**
4	Understand electrostatics: Structure of atom, electric charges, movement of electrons in a conductor, electrostatic units, capacitors in series and parallel.	2.55	0.952	2.20	0.957	1.609	**Not Sig.**
5	Understand the d.c. machines: Equation, armature reaction and efficiency of d.c. machines.	2.48	0.742	2.36	0.700	0.732	**Not Sig.**
6	Understand d.c. Motors: Speed and torque characteristics, starting speed, d. c. motor control and applications.	2.36	0.710	2.52	0.714	-0.916	**Not Sig.**
7	Understand d. c. generators; Method of excitation, open circuit characteristics, load characteristics of series and shunts generators.	2.29	0.829	2.12	0.927	0.869	**Not Sig.**
8	Understand the generation of alternating e.m.f: Average and r.m.s values	2.36	0.879	2.44	0.916	-0.348	**Not Sig.**
9	Understand electrical circuits: Single phase, two						

	phase and three phase circuits, circuits with R, Land C series & parallel	2.29	0.864	2.48	0.871	-0.917	**Not Sig.**
10	Understand transformers: Transformer action, transformer tests, the voltage regulations, autotransformers, three phase transformers.	2.55	0.983	2.52	0.918	0.172	**Not Sig.**
11	Understand electrical-electronics measurements: Moving coil iron, thermocouple, ammeters, volt-meters, watt-meters, ohmmeter and potentiometer.	2.45	0.609	2.48	0.653	-0.166	**Not Sig.**
12	Understand semi-conductor devices: Atomic structure, covalent bonds, n-type, p-type and semi-conductors.	1.92	0.606	1.92	0.493	0.048	**Not Sig.**
13	Understand electrolysis: Primary and secondary cells, simple voltaic cells, leclanche cell, mercury cells, characteristics of lead-acid and alkaline cells.	2.54	0.584	2.48	0.714	0.441	**Not Sig.**
14	Understand the field-effect transistors: the junction-field effect transistors, the metal oxide semi-conductor field effect transistor, static characteristics and integrated circuits.	2.48	0.680	2.44	0.820	0.269	**Not Sig.**
15	Understand amplifiers: Small-signal audio frequency amplifiers, negative feedback amplifiers, audio frequency power amplifiers and tuned amplifiers.	2.19	0.738	1.96	0.675	1.368	**Not Sig.**
16	Design electrical circuit drawing for installation of required points of light: in series and parallel connections	2.44	0.677	2.32	0.802	0.727	**Not Sig.**
17	Produce electric cable jointing: T-joints, married joints and Britannic joints.	2.70	0.574	2.84	0.553	1.007	**Not Sig.**
18	Install domestic electrical appliances: energy meters, protection devices, fuses and switches.	3.17	0.645	3.20	0.707	-0.152	**Not Sig.**
19	Install final sub-circuits: including earth continuity conductors to the general mass of the ground.	2.88	0.801	2.56	0.916	1.656	**Not Sig.**
20	Install conduit wiring: in domestic and commercial houses using pipes buried in walls and floors.	2.66	0.821	2.72	1.021	-0.283	**Not Sig.**
21	Install surface wiring: in domestic and commercial houses using required switches, fuses, points of light and cable joints in series and parallel connections.	2.82	0.827	2.92	0.812	-0.501	**Not Sig.**
22	Install trucking or duct electrical wiring containing many wires at a time trunking: in series and parallel connections.	2.30	0.885	2.64	0.860	-1.611	**Not Sig.**
23	Install extension board electrical wiring: for use in domestic and commercial appliances.	2.52	0.819	2.32	0.852	1.081	**Not Sig.**
24	Install d.c. machines and d.c. generators: in series and parallel connections.	2.69	0.717	2.84	0.553	-0.938	**Not Sig.**
25	Rectify faults in d.c. appliances: d.c. electric machines, d.c. electric d.c. electric generators.	2.57	0.966	2.72	0.890	-0.661	**Not Sig.**
26	Install domestic electrical appliances: Gold leaf		0.836		0.711	-0.553	

	circuits electroscopes, simple electric cookers and circuit alarm bells.	2.45		2.56			**Not Sig.**
27	Install electronic amplifiers: Simple amplifiers, audio amplifiers, and wide band amplifiers.	2.44	0.699	2.24	0.778	1.193	**Not Sig.**
28	Rectify faults in: transistor circuits, integrated circuits, and semi-conductors.	3.04	0.558	3.08	0.640	-0.264	**Not Sig.**

Key: $\mathbf{X_1}$ = Mean of Supervisors of Private Establishment
$\mathbf{X_2}$ = Mean of Supervisors of Public Establishment
$\mathbf{SD_1}$ = Standard Deviation of Supervisors of Private Establishment
$\mathbf{SD_2}$ = Standard Deviation of Supervisors of Public Establishment
DF = Degree of Freedom (68 + 25 = 93 ï 2 = 91)
t- table (critical) value = 1.96
Level of Significance = 0.05

The t-test analysis presented in Table 6 above showed that t-calculated (t-cal) values of all the 28 practical/technical work skill items ranged between -1.611 to 1.656 which are all less than the t-table (t-tab) value of 1.96 at PÒ 0.05 level of significance and at 91 degree of freedom (df). This indicated that, there is no significant difference between the mean ratings of responses of supervisors of private and public establishments on all the 28 practical/technical work skills possessed by graduates of electricity/electronics program of Federal College of Education (Technical) Bichi. Therefore, the null hypothesis of no significant difference for all the 28 practical/technical work skills possessed by the graduates is accepted.

Hypothesis 3

There is no significant difference on the mean responses of supervisors of private-owned and public establishments on work attitudes possessed by the graduates of electricity/electronics program of Federal College of Education (Technical), Bichi.

The data for testing hypothesis 3 are presented in table 7.

Table 7

The t–test Analysis of the Mean Ratings of the Responses of supervisors of privately-owned and public establishments on practical/technical work attitudes possessed by the graduates of electricity/electronics program of Federal College of Education (Technical), Bichi.

		Sup of Private N = 68		Sup of Public N = 25			
S/N	**Item Statements**	$\overline{X}_1$	SD_1	X_2	SD_2	t-Cal	Decision
1	Attendance to work regularly, on time and willing to go beyond the call of duty when the occasion demands.	2.22	0.807	2.60	0.957	-1.909	**Not Sig.**
2	Organization in work, monitoring of personal output and solution of work related problem.	2.88	1.000	2.64	1.036	1.026	**Not Sig.**
3	Working without unnecessary supervision and accepting genuine criticism from supervisors.	2.16	0.907	2.44	0.916	-1.307	**Not Sig.**
4	Co-operative with their supervisors, colleagues and constituted authority.	2.14	0.966	2.52	1.045	-1.614	**Not Sig.**
5	Perseverance, patience, endurance, tolerance and loyalty to employers.	3.23	0.848	2.80	1.040	2.061	**Sig.**
6	Following accepted safety practices for self, co-workers, equipment and facilities.	2.17	1.105	2.16	0.943	0.066	**Not Sig.**
7	Keeping work station areas clean, orderly and leaving it in a ready-to-use condition.	2.38	1.159	2.56	1.193	-0.650	**Not Sig.**
8	Keeping accurate records of supplies: tools, machines, equipment and monies.	2.60	0.900	2.12	0.971	2.246	**Sig.**
9	Willing to accept responsibilities and accountable for actions taken	2.59	.831	2.00	0.912	1.989	**Sig.**
10	Dressing as required on the job, presenting good personal appearance and neatness.	2.88	0.922	3.04	0.888	-0.737	**Not Sig.**
11	Returning of tools, machines and equipment in ready-to-use condition.	2.55	0.998	2.72	1.242	-0.645	**Not Sig.**
12	Avoidance of wasting time, materials and supplies.	2.22	0.861	2.20	0.866	0.102	**Not Sig.**
13	Good work adjustment, reduction of anxiety and factory phobia.	2.29	0.864	2.48	0.871	-0.917	**Not Sig.**

14	Interest in work, workers and respect for the right of other workers.	2.30	1.068	2.28	1.021	0.117	**Not Sig.**
15	Acceptance of instruction, correction, direction and regulations.	2.36	0.879	2.44	0.916	-0.348	**Not Sig.**
16	Development of self-confidence, resourcefulness and attention to details.	2.23	0.882	2.40	0.912	-0.790	**Not Sig.**
17	Accuracy and quality of work, productiveness and efficiency in work.	1.94	0.975	2.00	1.000	-0.256	**Not Sig.**

Key: $\mathbf{X_1}$ = Mean of Supervisors of Private Establishment
$\mathbf{X_2}$ = Mean of Supervisors of Public Establishment
$\mathbf{SD_1}$ = Standard Deviation of Supervisors of Private Establishment
$\mathbf{SD_2}$ = Standard Deviation of Supervisors of Public Establishment
DF = Degree of Freedom (68 + 25 = 93 ï 2 = 91)
t- table (critical) value = 1.96
Level of Significance = 0.05

Data presented in Table 7 above revealed that 14 out of 17 work attitudes possessed by graduates of electricity/electronic program of Federal College of Education (Technical) Bichi, Kano State had their calculated t-values ranged from -1.909 to 1.026 which were less than t-table value of 1.96 (two tailed test) at PÒ0.05 level of significance and at 91 degree of freedom (df). This indicated that there were no significant differences in the mean ratings of the responses of the two groups of respondents (Supervisors of private and public establishments) on the 14 work skill attitudes possessed by the graduates. Therefore, the null hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents on the 14 items was accepted.

The data also showed further that the remaining three items, specifically items 5, 8 and 9 had t-calculated values of 2.061, 2.246 and 1.989 respectively which were all greater than t-table value of 1.96 (two tailed test) at PÒ0.05 level of significance and at 91 degree of freedom (df). This implied that there was significant difference in the mean ratings of the responses of the two groups of respondents on the three work attitudes items possessed by graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State. Based on this result, the null hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents on the three items was rejected.

Hypothesis 4

There is no significant difference on the mean responses of supervisors of private-owned and public establishments on ways through which the skills of the students of

electricity/electronics program of Federal College of Education (Technical), Bichi could be improved upon.

The data for testing hypothesis 4 are presented in table 8.

Table 8

The t–test Analysis of the Mean Ratings of the Responses of supervisors of privately-owned and public establishments on ways through which the skills of the students of electricity/electronics program of Federal College of Education (Technical), Bichi could be improved upon.

		Sup of Private N = 68		Sup of Public N = 25			
S/N	**Item Statements**	$\overline{X}_1$	SD_1	X_2	SD_2	**t- Cal**	**Decision**
1	Through the Student industrial work Experience Scheme (SIWES)	3.75	0.469	3.60	0.707	1.183	**Not Sig.**
2	Through the student professional internship	3.45	0.721	3.60	0.645	-0.878	**Not Sig.**
3	Through the industrial Attachment Training (IT)	3.50	0.559	3.52	0.509	-0.156	**Not Sig.**
4	Through Field Trip/Excursion to relevant industries	3.63	0.543	3.72	0.541	-0.690	**Not Sig.**
5	Partnership between the school/college and the industries in terms of Tools/Equipment provision and skill training and exposure	3.58	0.495	3.48	0.509	0.926	**Not Sig.**
6	Through cooperative Education between the school/college and the industries.	3.41	0.495	3.40	0.500	0.101	**Not Sig.**
7	Soliciting for grants from relevant granting bodies for tools/equipment provision and training and procurement.	3.63	0.570	3.72	0.458	-0.690	**Not Sig.**
8	Making the students to construct practical project/assigning practical projects to students.	3.52	0.559	3.80	0.408	2.210	**Sig.**
9	Making arrangements for resource persons in relevant areas to give lectures/training on skill acquisition.	3.77	0.452	3.60	0.500	1.649	**Not Sig.**
10	Engaging the students from another institution to come and share experience in form of Networking.	3.52	0.502	3.52	0.509	0.080	**Not Sig.**

Key: X_1 = Mean of Supervisors of Private Establishment — t- table (critical) value = 1.96
X_2 = Mean of Supervisors of Public Establishment — Level of Significance = 0.05
SD_1 = Standard Deviation of Supervisors of Private Establishment
SD_2 = Standard Deviation of Supervisors of Public Establishment
DF = Degree of Freedom (68 + 25 = 93 ï 2 = 91)

Data presented in Table 8 above revealed that 9 out of 10 ways through which the skills of the students of electricity/electronics program of Federal College of Education (Technical), Bichi could be improved upon had their calculated t-values ranged from -0.878 to 1.649 which were less than t-table value of 1.96 (two tailed test) at PÒ0.05 level of significance and at 91 degree of freedom (df). This indicated that there were no significant

differences in the mean ratings of the responses of the two groups of respondents (Supervisors of private and public establishments) on the 9 ways through which the skills of the students of electricity/electronics program of Federal College of Education (Technical), Bichi could be improved upon. Therefore, the null hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents on the 9 items was upheld.

The data also showed further that the remaining one item, specifically item 8 had t-calculated value of 2.210 which was greater than t-table value of 1.96 (two tailed test) at PÒ 0.05 level of significance and at 91 degree of freedom (df). This indicated that there was significant difference in the mean ratings of the responses of the two groups of respondents on that particular item. Based on this result, the null hypothesis of no significant difference was rejected on item 8.

Findings of the Study

The following findings emerged from the study based on the research questions answered and the hypotheses tested. The findings from the research questions were presented under the following sub-headings:

1. General Work-skills Possessed by the Graduates of Electricity/Electronics Programs.

It was found out by the study that the respondents (supervisors of establishment) agreed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi possessed 13 out of the 32 general work-skills for work on graduation. The 13 identified general work skills possessed by the graduates are:

1. Allocating time efficiently
2. Meeting deadlines
3. Taking reasonable job-related risks
4. Conveying information one-to-one
5. Communicating ideas verbally to groups
6. Listening attentively
7. Working well with fellow employees
8. Relating well with supervisors
9. Establishing good rapport with subordinates
10. Delegating work to subordinates
11. Coordinating the work of subordinates
12. Adapting to situations of change

13. Maintaining a positive attitude.

The findings showed further that, the respondents agreed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State do not possess the remaining 19 general work-skills for work on graduation. The 19 general work skills not possessed by the graduates are:

1. Identifying essential components of a problem
2. Making decisions on the basis of thorough analysis of the situation
3. Recognizing the effects of decisions made
4. Assigning/delegating responsibility
5. Identifying potential negative outcomes when considering a risky venture
6. Monitoring progress toward objectives in risky Ventures
7. Making effective business presentations
8. Writing reports
9. Writing external business communication
10. Writing internal business communication
11. Using proper grammar, spelling, & punctuation
12. Identifying sources of conflict among people
13. Resolving conflicts
14. Supervising the work of others
15. Providing novel solutions to problems
16. Initiating change to enhance productivity
17. Keeping up-to-date with external realities related to your companyôs success
18. Functioning well in stressful situations
19. Ability to work independently

Ho 1: The study on hypothesis one found out that, the t-calculated (t-cal) value of -0.748 is less than the t-table (t-tab) value of 1.96 at PÒ0.05 level of significance. This finding showed that there is no significant difference between the mean ratings of responses of supervisors of private and public establishments on the general work skill possessed by graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State.

2. Practical/technical skills possessed by the graduates of electricity/electronics program

It was found out by the study that the respondents (supervisors of establishment) agreed that the graduates of electricity/electronics program of Federal College of Education

(Technical) Bichi Kano State possessed 11 out of the 28 practical/technical work-skills required for work on graduation. The 11 identified practical/technical work skills possessed are:

1. Interpret a simple electric circuit diagram: Units of current, voltage, resistance power Ohmôs law and Kirchhoffôs laws.
2. Understand transformers: Transformer action, transformer tests, the voltage regulations, auto-transformers, three phase transformers.
3. Design electrical circuit drawing for installation of required points of light: in series and parallel connections
4. Produce electric cable jointing: T-joints, married joints and Britannic joints.
5. Install domestic electrical appliances: Energy meters, protection devices, fuzes and switches.
6. Install final sub-circuits: including earth continuity conductors to the general mass of the ground.
7. Install conduit wiring: in domestic and commercial houses using pipes buried in walls and floors.
8. Install surface wiring: in domestic and commercial houses using required switches, fuses, points of light and cable joints in series and parallel connections.
9. Install extension board electrical wiring: for use in domestic and commercial appliances.
10. Rectify faults in d.c. appliances: d.c. electric machines, d.c. electric motors and d.c. electric generators.
11. Rectify faults in: Transistor circuits, integrated circuits, and semi-conductors.

On the other hand, the findings showed further that, the respondents agreed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State do not possess the remaining 17 practical/technical work-skills required for work on graduation. The 17 practical/technical work skills not possessed by the graduates are:

1. Understand electromagnetism: Magnetic flux, force on current-carrying conductors, electromagnetic induction, Flemingôs right hand rules and Lenzôs Law.
2. Understand the inductance in a d.c. circuit: self inductance, inductive and non inductive circuits and units of inductance.

3. Understand electrostatics: structure of atom, electric charges, movement of electrons in a conductor, electrostatic units, capacitors in series and parallel.
4. Understand the d.c. machines: Equation, armature reaction and efficiency of d.c. machines.
5. Understand d.c. Motors: Speed and torque characteristics, starting speed, d. c. motor control and applications.
6. Understand d. c. generators; Method of excitation, open circuit characteristics, load characteristics of series and shunts generators.
7. Understand the generation of alternating e.m.f: average and r.m.s values
8. Understand electrical circuits: Single phase, two phase and three phase circuits, circuits with R, L, C series & parallel
9. Understand electrical-electronics measurements: moving coil iron, thermocouple, ammeters, volt-meters, watt-meters, ohmmeter and potentiometer.
10. Understand semi-conductor devices: Atomic structure, covalent bonds, n-type, p-type and semi-conductors.
11. Understand electrolysis: Primary and secondary cells, simple voltaic cells, leclanche cell, mercury cells, characteristics of lead-acid and alkaline cells.
12. Understand the field-effect transistors: the junction-field effect transistors, the metal oxide semi-conductor field effect transistor, static characteristics and integrated circuits.
13. Understand amplifiers: small-signal audio frequency amplifiers, negative feedback amplifiers, audio frequency power amplifiers and tuned amplifiers.
12. Install trucking or duct electrical wiring containing many wires at a time: in series and parallel connections.
13. Install d.c. machines and d.c. generators: in series and parallel connections.
14. Install domestic electrical appliances: gold leaf circuits electroscopes, simple electric cookers and circuit alarm bells.
15. Install electronic amplifiers: simple amplifiers, audio amplifiers, and wide band amplifiers.

Ho 2: The study on hypothesis two found out that, the t-calculated (t-cal) value of 0.754 is less than the t-table (t-tab) value of 1.96 at PÒ0.05 level of significance. This finding showed that there is no significant difference between the mean ratings of responses of supervisors of private and public establishments on the practical/technical work skills

possessed by graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State.

3. Work attitudes possessed by the graduates of electricity/electronics program

It was found out by the study that the respondents (supervisors of establishment) agreed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State possessed 4 out of the 17 work attitudes required for work on graduation. The 4 identified work attitudes possessed by the graduates are:

1. Organization in work, monitoring of personal output and solution of work related problem.
2. Perseverance, patience, endurance, tolerance and loyalty to employers.
3. Dressing as required on the job, presenting good personal appearance and neatness.
4. Returning of tools, machines and equipment in ready-to-use condition.

On the other hand, the findings showed further that, the respondents agreed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State do not possess the remaining 13 work attitudes required for work on graduation. The 13 work attitudes that are not possessed by the graduates are:

1. Attendance to work regularly, on time and willing to go beyond the call of duty when the occasion demands.
2. Working without unnecessary supervision and accepting genuine criticism from supervisors.
3. Co-operative with their supervisions, colleagues and constituted authority.
4. Following accepted safety practices for self, co-workers, equipment and facilities.
5. Keeping work station areas clean, orderly and leaving it in a ready-to-use condition.
6. Keeping accurate records of supplies: Tools, machines, equipment and monies.
7. Willing to accept responsibilities and accountable for actions taken
8. Avoidance of wasting time, materials and supplies.
9. Good work adjustment, reduction of anxiety and factory phobia.
10. Interest in work, workers and respect for the right of other workers.
11. Acceptance of instruction, correction, direction and regulations.
12. Development of self-confidence, resourcefulness and attention to details.
13. Accuracy and quality of work, productiveness and efficiency in work.

Ho 3: The study on hypothesis three found out that, the t-calculated (t-cal) value of -0.427 is less than the t-table (t-tab) value of 1.96 at PÒ0.05 level of significance. This finding revealed that there is no significant difference between the mean ratings of responses of supervisors of private and public establishments on the work attitudes possessed by graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State.

4. Ways through which the work-skills of the students could be improved upon.

It was found out by the study that the respondents (supervisors of establishment) agreed that the work skills of the students of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State could be improved upon through all the 10 identified ways in the study. The 10 identified ways are:

1. Through the student industrial work Experience Scheme (SIWES)
2. Through the student professional internship
3. Through the industrial Attachment Training (IT)
4. Through Field Trip/Excursion to relevant industries
5. Partnership between the school/college and the industries in terms of Tools/Equipment provision and skill training and exposure
6. Through cooperative Education between the school/college and the industries.
7. Soliciting for grants from relevant granting bodies for tools/equipment provision and training and procurement.
8. Making the students to construct practical project/assigning practical projects to students.
9. Making arrangements for resource persons in relevant areas to give lectures/training on skill acquisition.
10. Engaging the students from another institution to come and share experience in form of Networking.

Ho 4: The study on hypothesis four found out that, the t-calculated (t-cal) value of -0.318 is less than the t-table (t-tab) value of 1.96 at PÒ0.05 level of significance. This finding revealed that there is no significant difference between the mean ratings of responses of supervisors of private and public establishments on the ways through which the work skills of

the students of electricity/electronics program of Federal Colleges of Education (Technical) Bichi Kano State could be improved upon in the place of work on graduation.

Discussion of Findings

The findings of this study were discussed under the following sub-headings in line with the specific purposes of the study:

1. General work-skills possessed by the graduates of electricity/electronics programs.
2. Practical/technical skills possessed by the graduates of electricity/electronics program.
3. Work attitudes possessed by the graduates of electricity/electronics program
4. Ways through which the work-skills of the students could be improved upon.

1. General work-skills possessed by the graduates of electricity/electronics programs.

The findings of this study in respect to research question one showed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State possessed 13 out of the 32 general work-skills for work on graduation in Kano State. The 13 identified general work skills possessed by the graduates include: allocating time efficiently, meeting deadlines, making reasonable job-related risks, conveying information one-to-one, communicating ideas verbally to groups, listening attentively, working well with fellow employees, relating well with supervisors, establishing good rapport with subordinates, delegating work to subordinates, co-ordinating the work of subordinates, adapting to situations of change and maintaining a positive attitude.

The above findings of this study is in line with that of Robinson (2006) who found out that employability skills were all considered as very important for graduates and that graduates should be competent in performing each of the activities. Based on the findings, the author therefore recommended that the College should address the problem of solving skills deficiency of students in order to ensure quality graduates from the college. It was also recommended that the faculty members should find ways of incorporating the identified employability skills into the curriculum to increase the employability of the graduates.

On the other hand, the findings of this study as regards research question one further revealed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State do not possess the remaining 19 general work-skills for work on graduation. The 19 identified general work skills not possessed by the graduates include: identifying essential components of a problem, making decisions on the basis of thorough analysis of the situation, recognizing the effects of decisions made, assigning/delegating responsibility, identifying potential negative outcomes when considering a risky venture, monitoring progress toward objectives in risky ventures, making effective business

presentations, writing reports, writing external business communication, writing internal business communication, using proper grammar, spelling & punctuation, identifying sources of conflict among people, resolving conflicts and others.

In support of these findings, Mbata (2008) discovered that some vocational technical students encountered problems in writing their examinations and completing their project reports because they lack basic reading and writing skills. This finding corroborates the result of a study conducted by Adewale *et. al* (2005) who reported that majority of Nigerian youths are literate and have potentials and the most tendencies to continue with vocational trades if their training needs are justifiably satisfied and their interests are well motivated in the profession. Therefore, Okon (2004) linked this situation to the great deficiency of the graduates in the theoretical and practical knowledge of their trades. Hence, Ozo (2007) and Okon (2004) stressed that in the training for skilled occupations, emphasis should be on theory acquisition right from the inception of the course, trainees and trainers should discuss intelligently and authoritatively what they carry out in their workshops.

2. Practical/technical skills possessed by the graduates of electricity/electronics program

The findings of this study on research question two showed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State possessed 11 out of the 28 practical/technical skills for work on graduation. The 11 identified practical/technical skills possessed by the graduates are: interpret a simple electric circuit diagram, understand transformers, design electrical circuit drawing for installation of required point of light, produce electric cable jointing, install domestic electrical appliances, and install final sub-circuits among others. It is imperative to state that most occupations in recent times needed the understanding of science, mathematics and technology education that is practical and technical oriented. This finding was justified by the report of Brockley and Robertson (2010) who found that the craftsman must be able to understand basic technical drawing and engineering designs, design theories, engineering technology, applied science and trade calculations to be capable of learning from published works as well as from expert advice. This will further enhance the practical/technical skills possessed by the graduates of vocational/technical trades on graduation.

On the other hand, the findings of this study as regards research question two further revealed that the graduates of electricity/electronics program of Federal College of Education

(Technical) Bichi Kano State do not possess the remaining 17 practical/technical skills for work on graduation. The 17 identified practical/technical skills not possessed by the graduates include: understand electromagnetism, understand the inductance in a d.c. circuit, understand electrostatics, understand the d.c. machines, understand d.c. motors, understand d. c. generators, understand the generation of alternating e.m.f, understand electrical circuits, understand electrical-electronics measurements, understand semi-conductor devices, understand electrolysis, understand the field-effect transistors and understand amplifiers among others.

The above findings of this study agreed with the findings of Chong (2006) who reported that graduates lack basic technical skills for work; that the graduates of technical program required occupational work-skills for entry into vocational trades on graduation. Recognizing this, Giachino and Gillington (2008) stated that a good program of technical education with proper articulation of general education should engender in its graduates: curiosity for scientific knowledge and endeavor, curiosity to acquire a sound knowledge of mathematics and science, knowledge and skill to apply sound engineering principles to the solution of problems dealing with product development and production.

3. Work attitudes possessed by the graduates of electricity/electronics program

The findings of this study in respect to research question three showed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi kano State possessed only 4 out of the 17 work attitudes required for work on graduation. The 4 identified work attitudes possessed by the graduates include: organization in work, monitoring of personal output and solution of work related problem; perseverance, patience, endurance, tolerance and loyalty to employers; dressing as required on the job, presenting good personal appearance and neatness and returning of tools, machines and equipment in ready-to-use condition. Osuala (2003) defined ówork personalityô vis-à-vis work attitude as the characteristics pattern of work activity displayed by a person in a work situation, and that work personality incorporates work situation. Branchle (2003) suggested that workers should possess certain work related skills and attitudes which are not cognitive or psychomotor in nature but seem to be closely knit and include generic transferable non-technical competencies considered necessary for long term survival in the world of work. These attitudes according to Uramah (2001) include; patience at work place, good

interpersonal relationship, good dressing code among others. This submission is in agreement with the findings of this study. On this note, Osuala (2003) Nash (2010) Owonde (2009) and Branchle (2003) added that the intangible behaviorsô of workers contributed immensely in determining their success in work life. For instance, co-operation with colleagues, punctuality to work, responsibility, care for materials, tools, equipment and self are among these intangible behaviors expected of competent workers.

On the other hand, the findings of this study as regards question three further revealed that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State do not possess the remaining 13 work attitude skills required for work on graduation. The 13 identified work attitude skills not possessed by the graduates include: attendance to work regularly, on time and willing to go beyond the call of duty when the occasion demands; working without unnecessary supervision and accepting genuine criticism from supervisors; co-operative with their supervisors, colleagues and constituted authority; following accepted safety practices for self, co-workers, equipment and facilities; keeping work station areas clean, orderly and leaving it in a ready-to-use condition; keeping accurate records of supplies; willing to accept responsibilities and accountable for actions taken; avoidance of wasting time, materials and supplies and good work adjustment, reduction of anxiety and factory phobia among others.

Owonde (2009) revealed that intangible behaviors in vocational education are not directly observable, but have to be inferred from other behavioral manifestations such as how well adjusted the students are in terms of co-operation with fellow workers, adjusting to industrial or workshop environment; care for materials and tools, work-safety. In the same vein, Ike (2006) in a study found out that the qualities of workers sought by employers include the ability to; organize work, monitor personal output, solve work related problems, take initiative when the need arises, schedule work effectively, speak and write intelligently, follow instruction strictly, interact with co-workers and members of the larger community, and develop the desire to progress in life as a worker and as a good citizen which are often times result from good attitude toward work. Unfortunately, the report of UNESCO (2003) showed that attitudes of graduates of vocational program in Africa are not encouraging as majority view vocational trades as occupations for the low class. Also, the study of Olaitan (2009) supported that Nigerian youth have negative attitude towards vocational education as majority tagged it as a profession for never do well. Based on the foregoing discussions, Mordu (2003) and Ike (2006) have serious implications to employees and employers of labour. For instance, the employees must possess good attitudes to work in order to be hired

and grow in the work. Most of these qualities are highly needed at the entry points as well as the workers acquired experience on the job.

4. Ways through which the work-skills of the students could be improved upon.

The findings of this study in respect to research question four showed that the work skills of the students of electricity/electronics program of Federal College of Education (Technical) Bichi Kano State could be improved upon by all the 10 identified ways suggested in the study. The 10 identified ways through which the work skills of the students could be improved upon include: through the Student Industrial work Experience Scheme (SIWES), through the student professional internship, through the industrial Attachment Training (IT), through Field Trip/Excursion to relevant industries, partnership between the school/college and the industries in terms of Tools/Equipment provision and skill training and exposure, through cooperative Education between the school/college and the industries, soliciting for grants from relevant granting bodies for tools/equipment provision and training and procurement, making the students to construct practical project/assigning practical projects to students, making arrangements for resource persons in relevant areas to give lectures/training on skill acquisition and engaging the students from another institution to come and share experience in form of networking.

The above findings of this study are in consonance with the report of UNESCO (2003) that the interest of the students of vocational education should be well motivated through competency-based vocational education and training, industrial attachment training, cooperative vocational education among others. Also, the report of National Board for Technical Education NBTE (2003) added that the studentsô industrial work experience scheme (SIWES) was introduced among others to boost studentsô interest in vocational education and trades. In addition, Olaitan (2001) suggested that adequate supply of instructional materials and making the tool/equipment in the school a replica of the situation of world of work on graduation will improve the interest of the students in vocational trades. The submissions of the above cited authors further validated the findings of this study.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of the statement of the problem, purpose of the study, procedure used for the study, major findings of the study, conclusion based on the findings, implications of the study, recommendation for implementation and suggestions for further study.

Restatement of the Problem

In recent times in Nigeria, many students look to educational institutions to provide them with the type of education that will prepare them for immediate employment and furthering their education or both. A situation where graduates of vocational education programs like those of the Colleges of Education (Technical) remained unemployed for a long time because they lack the theoretical knowledge, practical/technical skills and employability skills competencies as well as the right attitude to work is a signal that something is wrong and needed an urgent solution.

In todayôs workforce characterized by change and increasing competition for jobs, it is important for educational programs implementers to be aware of the qualities that are valued by employers in the industry. It is the role of Colleges of the Education to design and implement programs that are appropriate to the missions and goals of the government and to supply the workforce with relevant skills according to their needs and that of stakeholders and, or employers. Unfortunately, the report of World Bank (2005) showed that graduates of leading Colleges of Education in Nigeria did not meet the expectations of industrial employers despite their high standard certificates. Consequently, the graduates of these colleges were discriminated against in employment for they do not possess the knowledge and technical skills competencies as well as employability skills competencies required for first employment in industries.

If the industries are to survive, the school curriculum must be dynamic and able to adjust to new situations and environment that help to improve on-the -job effectiveness of future graduates. The more that is known about the competencies needed in the electricity/electronics careers and is incorporated into the curriculum development, the more employable electricity/electronics graduates will be in the market place, and the input from employers would provide a bench mark against which future students would be compared and serve as an assessment indicator. 73 re, there is need for assessment of the general

work skills and work attitudes possessed by Electricity/Electronics graduates using Federal College of Education (Technical) Bichi, Kano State as case study.

Purpose of the Study

The purpose of the study was to identify employersô assessment of the general work skills, technical skills and work attitudes of Electricity/Electronics graduates of the Federal College of Education (Technical), Bichi. Specifically, the study sough to:

5. Determine employersô assessment of the general work skills possessed by Electricity/Electronics graduates;
6. Find out the employersô assessment of the technical/practical skills possessed by Electricity/Electronics graduates;
7. Determine the employersô assessment of the work attitudes possessed by Electricity/Electronics graduates;
8. Identify ways through which the skills of students of Electricity/Electronics programs could be improved to enable them to be relevant to needs of the employers in Kano State.

Summary of the Procedure used for the Study.

Four research questions were developed and answered by the study while four null hypotheses were formulated and tested at P Ò 0.05 level of significance and at 91 degree of freedom (df). The study was carried out in Kano State using survey research design. The population for the study was registered 538 small-scale, medium-scale and large-scale privately and publicly-owned industries and establishments in Kano State. The sample for the study is 93 supervisors of establishments. This comprise 68 and 25 supervisors from private and government-owned industries and establishments respectively that are operational in Kano State and subsequently employing graduates of Electricity/Electronics program of Federal College of Education (Technical) Bichi, Kano State. A structured questionnaire was used to obtain data from the respondents (supervisors of establishments) for the study. The questionnaire was validated by three experts from the Department of Vocational Teacher Education, University of Nigeria, Nsukka. The reliability of the instrument was achieved using trial testing of the instrument to similar respondents in Delta State after which Cronbach Alpha method was used to obtain the reliability coefficient of 0.925 for the instrument. The questionnaire was administered by the researcher with the help of three research assistants across the private and public establishments in the state where the graduates are being employed. Mean and standard deviation were used in answering the

research questions while t-test statistics was used for testing the hypotheses (Ho) at P Ò0.05 level of significance and 91 degree of freedom (df).

Major Findings of the Study

It was found out from the study that the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State possessed 28 out of the 77 identified work skills and work attitudes required by the graduates for work on graduation. The study also found out that the graduates do not possess the remaining 49 work skills required for work on graduation. Specifically, the study found out that:

1. The general work skills possessed by the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State was not satisfactory. This is because, the graduates possessed only 13 out of the identified 32 general work skills; while the remaining 19 general work skills required by the graduates were not possessed.
2. The practical/technical skills possessed by the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State was not satisfactory. This is because, the graduates possessed only 11 out of the identified 23 practical/technical skills; while the remaining 17 practical/technical skills required by the graduates were not possessed.
3. The work attitudes possessed by the graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State was not satisfactory. This is because, the graduates possessed only 4 out of the identified 17 work attitudes; while the remaining 13 work attitudes required by the graduates were not possessed.
4. The ways through which the skills of the students of electricity/electronics of Federal College of Education (Technical) Bichi, Kano State could be improved upon to enable them to be relevant to the needs of the employers were very satisfactory as all the identified ways exceeded the cut-off point value of 2.50 on a 4-point rating scale. Some of these ways include: through the Student industrial work Experience Scheme (SIWES), through the student professional internship, through the industrial Attachment Training (IT), through Field Trip/Excursion to relevant industries and through cooperative Education between the school/college and the industries among others.
5. That there is no significant difference between the mean ratings of responses of supervisors of private and public establishments on the general work skill possessed

by graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State.

6. That there is no significant difference between the mean ratings of responses of supervisors of private and public establishments on the practical/technical work skills possessed by graduates of electricity/electronics programs of Federal College of Education (Technical) Bichi, Kano State.
7. That there is no significant difference between the mean ratings of responses of supervisors of private and public establishments on the work attitudes possessed by graduates of electricity/electronics program of Federal College of Education (Technical) Bichi, Kano State.
8. That there is no significant difference between the mean ratings of responses of supervisors of private and public establishments on the ways through which the work skills of the students of electricity/electronics program of Federal Colleges of Education (Technical) Bichi, Kano State could be improved upon in the place of work on graduation.

Conclusion on the Findings of the Study

This study was carried out to assess the general work skills and work attitudes possessed by electricity/ electronics graduates of Federal College of Education (Technical) Bichi, Kano State. The study found out that graduates of electricity/ electronics program of Federal College of Education (Technical) Bichi Kano State possessed only 28 out of the 77 identified work skills and work attitudes required by the graduates for work on graduation. This indicates that a larger proportion of the remaining 49 work-skills were not possessed by the graduates, hence, this could be responsible for unemployability of the graduates due to lack of saleable skills on graduation. It is therefore concluded that if the federal and state governments and their concerned agencies and other stakeholders can help create a platform where the curriculum of the Federal Colleges of Education (Technical) could be enriched and the graduates be retrained in skill acquisition centers, their employment in electricity/electronics industry in the State and beyond will be improved.

Educational Implications of the Study

The findings of this study had some implications to the owner of the College (Federal government of Nigeria), the administration of the College and Lecturers in the College.

1. If the Federal government can assist in packaging the work-skills required for effectiveness of the graduates in work place into a program and use such for training the graduates through skill acquisition centers, it will help to equip them for enhanced employment opportunity in electricity/electronics industry in Kano State and environs. This will help to address the mass unemployment situation among the graduates in the area and the country in general.
2. The study served as eye openers to the management of the College to know areas of lapses and gaps in studentsô knowledge in order to make necessary policies towards addressing the problems and gaps.
3. The findings of the study can be of great significance to the lecturers of Electricity/Electronics program in the College by way of helping them to identify the areas where their students are grossly deficient for necessary actions.

Recommendations

1. That all the identified work-skills be used for improving the existing curriculum of electricity/electronics program of Federal Colleges of Education (Technical). This will help enhance the quality of graduates being produced by the colleges.
2. That all the ten identified ways through which the skills of the students of electricity/electronics program could be improved upon be implemented by the school administration in collaboration with the government for quality assurance of the graduates. Some of the identified ways are through the Student industrial work Experience Scheme (SIWES), through the student professional internship, through the industrial Attachment Training (IT), through Field Trip/Excursion to relevant industries and through Cooperative Education between the school/college and the industries among others.

Suggestions for Further Study

It is suggested that further research could be carried out in the following areas:

1. An assessment of the competency possessed by the lecturers of electricity/electronics program in Federal College of Education (Technical) Bichi Kano State.
2. Identification of challenges facing the graduates of electricity/electronics program in work place in Kano State.
3. Assessment of the program of skill acquisition centers in meeting training needs of youths in electricity/electronics in Kano State.

4. In-service training needs of lecturers of electricity/electronics program in effective teaching of students in Federal Colleges of Education (Technical).
5. Employersô assessment of the general work skills and work attitudes possessed by electricity/ electronics graduates of Colleges of Education (Technical) in other States.

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APPENDICES

Appendix I

Table 1: Sampling of the Respondents for the Study.

S/N	PRIVATELY-OWNED COMPANY/ESTABLISHMENTS	Supervisor
1	Kano Sugar Processing Company Ltd., Sharada Phase III, Kano.	1
2	FAS Agro Company Ltd., Sharada Phase III, Kano.	1
3	Angel Spinning Company Ltd., Sharada Phase III, Kano.	1
4	Lela Agro Company Ltd., Sharada Phase III, Kano.	1
5	Gongoni Company Ltd., Sharada Phase III, Kano.	1
6	African Textile Company Ltd., Challawa, Kano.	1
7	Mahaza Tannery Company Ltd., Challawa, Kano.	1
8	Coca-cola Company Ltd., Challawa, Kano.	1
9	W.J. Bush Company Ltd. Bompai, Kano.	1
10	Royal Foam Company Ltd. Sharada Phase II, Kano.	1
11	AL-HILAL Company Ltd. Sharada Phase II, Kano.	1
12	Best Bag Company Ltd. Sharada Phase II, Kano.	1
13	Jay-Kay Carpets Company Ltd. Sharada Phase I, Kano.	1
14	Tahir Oil Mill Company Ltd. Sharada Phase III, Kano.	1
15	Unique Tannery Company Ltd. Sharada Phase I, Kano.	1
16	Dangote Flour Mills Company Ltd. Sharada Phase III, Kano.	1
17	Triumph Nigeria Ltd, Dantata Rd. Bompai Rd., Kano.	1
18	African Energy Company Ltd. Sharada Phase III, Kano.	1
19	Dantata Wood and Steel Company Ltd. Sharada II, Kano.	1
20	Cello-Pack Company Ltd. Sharada II, Kano.	1
21	Bagco Super-Sack Company Ltd. Sharada III, Kano.	1
22	Seeded Venture Company Ltd. Sharada III, Kano.	1
23	Northern Furniture Company Ltd. Sharada III, Kano.	1
24	Viva Super Sack Company Ltd., Bompai, Kano.	1
25	Dala Food Company Ltd. Sharada Phase III, Kano.	1
26	Fata Tannery Company Ltd., Challawa, Kano.	1
27	Godôs Little Tannery Company Ltd., Challawa, Kano.	1
28	Ayafa Tannery Company Ltd., Challawa, Kano.	1
29	Mario-Jo- Tannery Company Ltd., Challawa, Kano.	1

30	Heart Plastic Company Ltd., Challawa, Kano.	1
31	Sam-Star Plastic Company Ltd., Challawa, Kano.	1
32	Nakudu Tannery Company Ltd., Challawa, Kano.	1
33	Shour Gallery Company Ltd., Bompai, Kano.	1
34	Northern Nigerian Flour Mills, Mai-Mallari Road, Bompai, Kano.	1
35	Vitafoam Company Ltd., Mai-Mallari Road, Bompai, Kano.	1
36	SDY Construction Company Ltd. Club Road, Kano.	1
37	Dantata & Sawoe Construction Company Ltd., Club Road, Kano.	1
38	Triacta Construction Comp. Ltd. Murtala Mohd. Way, Kano.	1
39	Multi-Tan Tannery Company Ltd. Chalawa, Kano.	1
40	7-up Bottling Company Ltd. Dawakin-kudu, Kano.	1
41	I.R.S. Rice Mill Company Ltd. Sharada Phase II, Kano.	1
42	Jana Water Bottling Company Ltd. Sharada III, Kano.	1
43	Nigeria-Spanish Company Ltd, Sharada II, Kano.	1
44	Nigeria Pipe Company Ltd. Sharada II, Kano.	1
45	Fan Milk Company Ltd., Challawa, Kano.	1
46	S. Roda Plastic Company Ltd., Sharada I, Kano.	1
47	M.C. Plastic Company Ltd., Sharada I, Kano.	1
48	Globus Tannery Company Ltd, Challawa, Kano.	1
49	Selan Garu Tannery Company Ltd, Challawa, Kano.	1
50	Fine Leather Tannery Company Ltd, Challawa, Kano.	1
51	White Gold Tannery Company Ltd, Challawa, Kano.	1
52	United Gas Tannery Company Ltd, Challawa, Kano.	1
53	Medians Company Ltd, Challawa, Kano.	1
54	Amasco Company Ltd, Club Rd, Bompai, Kano.	1
55	ASA Company Ltd, Club Rd, Bompai, Kano.	1
56	Standard Plastic Company Ltd, Club Rd, Bompai, Kano.	1
57	Baily Plastic Company Ltd, Club Rd, Bompai, Kano.	1
58	SSB Plastic Company Ltd, Club Rd, Bompai, Kano.	1
59	BUA Flour Mills Company Ltd, Mission Rd. Bompai, Kano.	1
60	OASIS Company Ltd., Kano.	1
61	Diamond Sack Company Ltd. Sharada Phase I, Kano.	1

62	SAVIL Plastic Company Ltd., Bompai, Kano.	1
63	Gee-Pee Plastic Company. Ltd., Sharada II, Kano.	1
64	NINO Plastic Company Ltd., Challawa, Kano.	1
65	MTN Company Ltd, Civil Centre Rd., Kano.	1
66	Megatech Communications Coy. Ltd. Murtala Mohd. Way, Kano.	1
67	Glo Communication Company Ltd Murtala Mohd. Way, Kano.	1
68	Jubaili Engineering Company Ltd. Murtala Mohd. Way, Kano.	1
GOVERNMENT-OWNED ESTABLISHMENT		
69	Nigerian Television Authority, Bompai, Kano.	1
70	Federal Civil Aviation Authority, Kano.	1
71	National Air Space Management Agency, Kano.	1
72	Radio Kano, Ibrahim Taiwo Rd., Kano.	1
73	Abubakar Rimi Television, Hotoro, Kano.	1
74	Water Resources, Eng. & Const. Agency (WRECA) Challawa,Kano.	1
75	Kano-Line Transport Company, Audu Bako Way, Kano.	1
76	Nigeria Railway Corporation, Civic Centre Road, Kano.	1
77	Nat. Aviation Handling Coy. Ltd., Aminu Kano Intôl Airport, Kano.	1
78	Kano State Ministry of Works, Audu Bako Secretariate, Kano.	1
79	Federal Ministry of Works, Fed. Secretariat Katsina Rd., Kano.	1
80	Federal Road Maintenance Agency, Kano.	1
81	Jamare-Hadejia River Basin Development Authority, Kura, Kano.	1
82	Works Department, Federal College of Ed. (Tech) Bichi, Kano.	1
83	National Truck Manufacturers, Naibawa, Zaria Road, Kano.	1
84	Nigerian Airforce (303 Flying Training School) Airport Road Kano.	1
85	Nigeria Army (3 Mot. Bridge), Bukavu Barracks Kano.	1
86	Nigerian Communication Commission, Kano.	1
87	Works Department, Nassarawa Local Government Area, Nassarawa.	1
88	Works Department, Dala Local Government Area, Dala.	1
89	Works Department, Kumbotso Local Government Area, Kumbotso.	1
90	Works Department, Kano Municipal Local Government Area, KMC.	1
91	Works Department, Kura Local Government Area, Kura.	1

92	Federal Roads Safety Commision, Kano.	1
93	Power Holdings Company of Nigeria, Post Office Road Kano.	1

APPENDIX II

REQUEST FOR VALIDATION OF RESEARCH INSTRUMENT

Vocational Teacher Education,
University of Nigeria,
Nsukka.
Enugu State.
20th July, 2011.

Dear Sir/Ma,

Request to Validate a Questionnaire.

The attached questionnaire is part of a postgraduate study being undertaken in the Department of Vocational Teacher Education.

The purpose of the study is to find out the employers assessment of the general work skills, technical skills and work attitudes the graduates of Electrical / Electronic program of the Federal College of Education (Technical), Bichi.

You are please requested to validate the items as objectively as you can. You are also requested to assist in improving the quality of the instrument by making any necessary corrections. Every information will be treated as confidential and for the research purpose only.

Yours faithfully,

Attamah, C. E.

APPENDIX III

LETTER TO RESPONDENTS

Vocational Teacher Education,
University of Nigeria,
Nsukka.
Enugu State.
20th July, 2011.

Dear Sir/Ma,

Request to Answer a Questionnaire.

This research study is aimed at finding out the Employersô assessment of the general work skills, technical skills and work attitudes possessed by the graduates of Federal College of Education (Technical) Bichi of Electrical / Electronic program. To achieve this objective, your cooperation is hereby sought to answer all the items in this questionnaire as applicable to you and your industry. Your response will be treated with absolute confidentiality and anonymity. Please do not write your name.

Thanks for your anticipated cooperation.

Yours Sincerely

Attamah, C. E.

APPENDIX IV

QUESTIONNAIRE

Employersô assessment of the general work skills, technical skills and work attitudes possessed by electricity / electronics graduates of Federal College of Education (Technical) Bichi.

SECTION A: GENERAL WORK SKILLS POSSESSED BY GRADUATES

Indicate using a check mark (ã) the level of competence possessed by graduates of electricity/electronics of the following general work skills		Highly Possessed	Moderately Possessed	Poorly Possessed	Not Possessed
1	Identifying essential components of a problem				
2	Making decisions on the basis of thorough analysis of the situation				
3	Recognizing the effects of decisions made				
4	Assigning/delegating responsibility				
5	Allocating time efficiently				
6	Meeting deadlines				
7	Taking reasonable job-related risks				
8	Identifying potential negative outcomes when considering a risky venture				
9	Monitoring progress toward objectives in risky Ventures				
10	Conveying information one-to-one				
11	Communicating ideas verbally to groups				
12	Making effective business presentations				
13	Writing reports				
14	Writing external business communication				
15	Writing internal business communication				
16	Using proper grammar, spelling, & punctuation				

17	Listening attentively				
18	Working well with fellow employees				
19	Relating well with supervisors				
20	Establishing good rapport with subordinates				
21	Identifying sources of conflict among people				
22	Resolving conflicts				
23	Supervising the work of others				
24	Delegating work to subordinates				
25	Coordinating the work of subordinates				
26	Providing novel solutions to problems				
27	Adapting to situations of change				
28	Initiating change to enhance productivity				
29	Keeping up-to-date with external realities related to your companyôs success				
30	Maintaining a positive attitude				
31	Functioning well in stressful situations				
32	Ability to work independently				

SECTION B: TECHNICAL WORK SKILLS POSSESSED BY GRADUATES.

Indicate using a check mark (ã) the technical work skills possessed by graduates of Electricity/ Electronics program of Federal College of Education (Technical) Bichi.

S/N	Questionnaire Items	Highly Possessed	Moderately Possessed	Poorly Possessed	Not Possessed
1	Interprete a simple electric circuit diagram: units of current, voltage, resistance power Ohmôs law and Kirchhoffôs laws.				
2.	Understand electromagnetism: magnetic flux, force on current-carrying conductors, electromagnetic induction, Flemings right hand rules and Lenôz Law.				
3.	Understand the inductance in a d.c. circuit: self inductance, inductive and non inductive circuits and units of inductance.				
4.	Understand electrostatics: structure of atom, electric charges, movement of electrons in a conductor, electrostatic units, capacitors in series and parallel.				
5.	Understand the d.c. machines: equation, armature reaction and efficiency of d.c. machines.				
6.	Understand d.c. Motors: Speed and torque characteristics, starting speed, d. c. motor control and applications.				
7.	Understand d. c. generators; method of excitation, open circuit characteristics, load characteristics of series and shunt generators.				
8.	Understand the generation of alternating e.m.f: average and r.m.s values				
9.	Understand electrical circuits: single phase, two phase and three phase circuits, circuits with R, Land C series and parallel				
10.	Understand transformers: transformer action, transformer tests, the voltage regulations, autotransformers, three phase transformers.				
11.	Understand electrical-electronics measurements: moving coil iron, thermocouple, ammeters, volt-meters, watt-meters, ohmmeter and potentiometer.				
12.	Understand semi-conductor devices: atomic structure, covalent bonds, n-type, p-type and semi-conductors.				
13.	Understand electrolysis: primary and secondary cells, simple voltaic cells, leclanche cell, mercury cells, characteristics of lead-acid and alkaline cells.				

14.	Understand the field-effect transistors: the junction-field effect transistors, the metal oxide semi-conductor field effect transistor, static characteristics and integrated circuits.				
15.	Understand amplifiers: small-signal audio frequency amplifiers, negative feed back amplifiers, audio frequency power amplifiers and tuned amplifiers.				
16.	Design electrical circuit drawing for installation of required points of light: in series and parallel connections				
17.	Produce electric cable jointing: T-joints, married joints and Britannic joints.				
18.	Install domestic electrical appliances: energy meters, protection devices, fuzes and switches.				
19.	Install final sub-circuits: including earth continuity conductors to the general mass of the ground.				
20.	Install conduit wiring: in domestic and commercial houses using pipes buried in walls and floors.				
21.	Install surface wiring: in domestic and commercial houses using required switches, fuzes, points of light and cable joints in series and parallel connections.				
22.	Install trucking or duct electrical wiring containing many wires at a time: in series and parallel connections.				
23.	Install extension board electrical wiring: for use in domestic and commercial appliances.				
24.	Install d.c. machines and d.c. generators: in series and parallel connections.				
25.	Rectify faults in d.c. appliances: d.c. electric machines, d.c. electric motors and d.c. electric generators.				
26.	Install domestic electrical appliances: gold leaf circuits electroscopes, simple electric cookers and circuit alarm bells.				
27.	Install electronic amplifiers: simple amplifiers, audio amplifiers, and wide band amplifiers.				
28	Rectify faults in: transistor circuits, integrated circuits, and semi-conductors.				

SECTION C: WORK ATTITUDES POSSESSED BY GRADUATES OF FEDERAL COLLEGE OF EDUCATION (TECHNICAL) BICHI.

Indicate using a check mark (ã) the work attitudes possessed by graduates of Electricity/Electronics program of Federal College of Education (Technical) Bichi.

S/N	Questionnaire Items	Highly Possessed	Moderately Possessed	Poorly Possessed	Not Possessed
30.	Attendance to work regularly, on time and willing to go beyond the call of duty when the occasion demands.				
31.	Organization in work, monitoring of personal output and solution of work related problem.				
32.	Working without unnecessary supervision and accepting genuine criticism from supervisors.				
33.	Co-operative with their supervisions, colleagues and constituted authority.				
34.	Perseverance, patience, endurance, tolerance and loyality to employers.				
35.	Following accepted safety practices for self, co-workers, equipment and facilities.				
36.	Keeping work station areas clean, orderly and leaving it in a ready-to-use condition.				
37.	Keeping accurate records of supplies: Tools, machines, equipment and monies.				
38.	Willing to accept responsibilities and accountable for actions taken				
39.	Dressing as required on the job, presenting good personal appearance and neatness.				
40.	Returning of tools, machines and equipment in ready-to-use condition.				
41.	Avoidance of wasting time, materials and supplies.				
42.	Good work adjustment, reduction of anxiety and factory phobia.				
43.	Interest in work, workers and respect for the right of other workers.				
44.	Acceptance of instruction, correction, direction and regulations.				
45.	Development of self-confidence, resourcefulness and attention to details.				
46.	Accuracy and quality of work, productiveness and efficiency in work.				

SECTION D

WAYS OF IMPROVING THE GENERAL WORK SKILLS, TECHNICAL SKILLS AND WORK ATTITUDES OF ELECTRICITY / ELECTRONICS GRADUATES.

Indicate using a check mark (ã) the extent to which you agree that the following are ways of improving the general work skills, technical skills and work attitude possessed by graduates of Federal College of Education (Technical) Bichi.

S/N	ITEMS	SA	A	D	SD
1	Through the student industrial work Experience Scheme (SIWES)				
2	Through the student professional internship				
3	Through the industrial Attachment Training (IT)				
4	Through Field Trip/Excursion to relevant industries				
5	Partnership between the school/college and the industries in terms of Tools/Equipment provision and skill training and exposure				
6	Through cooperative Education between the school/college and the industries.				
7	Soliciting for grants from relevant granting bodies for tools/equipment provision and training and procurement.				
8	Making the students to construct practical project/assigning practical projects to students.				
9	Making arrangements for resource persons in relevant areas to give lectures/training on skill acquisition.				
10	Engaging the students from another institution to come and share experience in form of Networking.				

Appendix V
The Result of Reliability Test

Case Processing Summary

		N	%
Cases	Valid	15	100.0
	Excluded[a]	0	.0
	Total	15	100.0

Reliability Statistics

Cronbach's Alpha	N of Items
.925	87

APPENDIX VI

Result of the Data Analyzed

RQ 1: General Work Skills Possessed by the Graduates

	N	Mean	Std. Deviation
AItem1	93	2.2473	1.06990
AItem2	93	2.4946	1.03864
AItem3	93	2.1720	1.06958
AItem4	93	2.3763	.98812
AItem5	93	2.5269	.68511
AItem6	93	2.7204	.85167
AItem7	93	2.6559	.94977
AItem8	93	2.3011	.88201
AItem9	93	2.3441	.86596
AItem10	93	2.5484	.96139
AItem11	93	2.8602	.82872
AItem12	93	2.0108	.61670
AItem13	93	1.9140	.86798
AItem14	93	2.0323	.86542
AItem15	93	2.3978	.67791
AItem16	93	2.4086	.71073
AItem17	93	3.0538	.69729
AItem18	93	3.3011	.63904
AItem19	93	3.1613	.82476
AItem20	93	3.2366	.78571
AItem21	93	2.4516	.91504
AItem22	93	2.2688	.93413
AItem23	93	2.4624	.81506
AItem24	93	2.6667	.74211
AItem25	93	2.6129	.94446
AItem26	93	2.1183	.83209
AItem27	93	3.0108	.85331
AItem28	93	2.3011	.89424
AItem29	93	2.3871	.84740
AItem30	93	2.9785	.94384
AItem31	93	2.3441	.87842
AItem32	93	2.2473	.99625
Valid N (listwise)	93		

RQ 2: Technical Work Skills Possessed by the Graduates.

	N	Mean	Std. Deviation
BItem1	93	2.7957	.84131

BItem2	93	2.3441	1.00536
BItem3	93	2.3441	1.14678
BItem4	93	2.4624	.96187
BItem5	93	2.4516	.73004
BItem6	93	2.4086	.71073
BItem7	93	2.2473	.85537
BItem8	93	2.3871	.88505
BItem9	93	2.3441	.86596
BItem10	93	2.5484	.96139
BItem11	93	2.4624	.61784
BItem12	93	1.9247	.57553
BItem13	93	2.4122	.71136
BItem14	93	2.4731	.71614
BItem15	93	2.1290	.72571
BItem16	93	2.5236	.61821
BItem17	93	2.7419	.56920
BItem18	93	3.1828	.65849
BItem19	93	2.7957	.84131
BItem20	93	2.6774	.87429
BItem21	93	2.8495	.82021
BItem22	93	2.3978	.88637
BItem23	93	2.7341	.67712
BItem24	93	2.4735	.82932
BItem25	93	2.6129	.94446
BItem26	93	2.4839	.80235
BItem27	93	2.3871	.72280
BItem28	93	3.0538	.57796
Valid N (listwise)	93		

RQ 3: Work Attitudes Possessed by the Graduates

	N	Mean	Std. Deviation
CItem1	93	2.3226	.86176
CItem2	93	2.8172	1.01023
CItem3	93	2.2366	.91364
CItem4	93	2.2473	.99625
CItem5	93	3.1183	.91900
CItem6	93	2.1720	1.05936
CItem7	93	2.4301	1.16468
CItem8	93	2.4731	.93937
CItem9	93	2.2903	.86704
CItem10	93	2.9247	.91172
CItem11	93	2.6022	1.06465
CItem12	93	2.2151	.85782
CItem13	93	2.3441	.86596
CItem14	93	2.3011	1.05072
CItem15	93	2.3871	.88505
CItem16	93	2.2796	.88913
CItem17	93	1.9570	.97706
Valid N (listwise)	93		

RQ 4: Ways of Improving the General Work Skills of the graduates,

	N	Mean	Std. Deviation
DItem1	93	3.7097	.54335
DItem2	93	3.4946	.70130
DItem3	93	3.5054	.54421
DItem4	93	3.6559	.54163
DItem5	93	3.5591	.49918
DItem6	93	3.4086	.49424
DItem7	93	3.6559	.54163
DItem8	93	3.6022	.53446
DItem9	93	3.7312	.46950
DItem10	93	3.5269	.50198
Valid N (listwise)	93		

Result of Hypotheses Testing

Hypothesis One:

	Status	N	Mean	Std. Deviation	Std. Error Mean
AItem1	Private Supervisors	68	2.2500	1.05625	.12809
	Public Supervisors	25	2.2400	1.12842	.22568
AItem2	Private Supervisors	68	2.4265	1.06947	.12969
	Public Supervisors	25	2.6800	.94516	.18903
AItem3	Private Supervisors	68	2.2206	1.04875	.12718
	Public Supervisors	25	2.0400	1.13578	.22716
AItem4	Private Supervisors	68	2.4853	.96958	.11758
	Public Supervisors	25	2.0800	.99666	.19933
AItem5	Private Supervisors	68	2.5441	.70040	.08494
	Public Supervisors	25	2.4800	.65320	.13064
AItem6	Private Supervisors	68	2.6618	.83951	.10181
	Public Supervisors	25	2.8800	.88129	.17626
AItem7	Private Supervisors	68	2.8088	.88533	.10736
	Public Supervisors	25	2.2400	1.01160	.20232
AItem8	Private Supervisors	68	2.2500	.87032	.10554
	Public Supervisors	25	2.4400	.91652	.18330
AItem9	Private Supervisors	68	2.2941	.86488	.10488
	Public Supervisors	25	2.4800	.87178	.17436
AItem10	Private Supervisors	68	2.5588	.98318	.11923
	Public Supervisors	25	2.5200	.91833	.18367
AItem11	Private Supervisors	68	2.8971	.83111	.10079
	Public Supervisors	25	2.7600	.83066	.16613
AItem12	Private Supervisors	68	2.0147	.65774	.07976
	Public Supervisors	25	2.0000	.50000	.10000
AItem13	Private Supervisors	68	1.9118	.87648	.10629
	Public Supervisors	25	1.9200	.86217	.17243
AItem14	Private Supervisors	68	2.0882	.84173	.10208
	Public Supervisors	25	1.8800	.92736	.18547
AItem15	Private Supervisors	68	2.3971	.67226	.08152
	Public Supervisors	25	2.4000	.70711	.14142
AItem16	Private Supervisors	68	2.4412	.67762	.08217

	Public Supervisors	25	2.3200	.80208	.16042
AItem17	Private Supervisors	68	2.9559	.70040	.08494
	Public Supervisors	25	3.3200	.62716	.12543
AItem18	Private Supervisors	68	3.3088	.62908	.07629
	Public Supervisors	25	3.2800	.67823	.13565
AItem19	Private Supervisors	68	3.2941	.71360	.08654
	Public Supervisors	25	2.8000	1.00000	.20000
AItem20	Private Supervisors	68	3.1618	.80317	.09740
	Public Supervisors	25	3.4400	.71181	.14236
AItem21	Private Supervisors	68	2.4706	.90555	.10981
	Public Supervisors	25	2.4000	.95743	.19149
AItem22	Private Supervisors	68	2.1324	.92888	.11264
	Public Supervisors	25	2.6400	.86023	.17205
AItem23	Private Supervisors	68	2.5294	.81900	.09932
	Public Supervisors	25	2.2800	.79162	.15832
AItem24	Private Supervisors	68	2.6029	.79438	.09633
	Public Supervisors	25	2.8400	.55377	.11075
AItem25	Private Supervisors	68	2.5735	.96686	.11725
	Public Supervisors	25	2.7200	.89069	.17814
AItem26	Private Supervisors	68	2.0441	.85403	.10357
	Public Supervisors	25	2.3200	.74833	.14967
AItem27	Private Supervisors	68	3.0294	.84590	.10258
	Public Supervisors	25	2.9600	.88882	.17776
AItem28	Private Supervisors	68	2.2353	.86590	.10501
	Public Supervisors	25	2.4800	.96264	.19253
AItem29	Private Supervisors	68	2.2647	.78451	.09514
	Public Supervisors	25	2.7200	.93630	.18726
AItem30	Private Supervisors	68	3.1029	.88334	.10712
	Public Supervisors	25	2.6400	1.03602	.20720
AItem31	Private Supervisors	68	2.2794	.87836	.10652
	Public Supervisors	25	2.5200	.87178	.17436
AItem32	Private Supervisors	68	2.1471	.96606	.11715
	Public Supervisors	25	2.5200	1.04563	.20913
Summary1	**Private Supervisors**	**68**	**2.4819**	**0.13270**	**0.01609**

Public Supervisors	**25**	**2.4588**	**0.19954**	**0.03991**

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	Df	Sig. (2-tailed)	Std. Error Difference
Altem1	.287	.593	.040	91	.968	.22904
			.039	40.449	.969	.25950
Altem2	1.757	.188	-1.044	91	.299	.24281
			-1.106	48.095	.274	.22925
Altem3	.911	.342	.720	91	.473	.25082
			.694	39.997	.492	.26034
Altem4	.023	.879	1.774	91	.079	.22846
			1.751	41.794	.087	.23143
Altem5	.258	.613	.398	91	.691	.16098
			.411	45.656	.683	.15582
Altem6	.305	.582	-1.097	91	.276	.19898
			-1.072	41.048	.290	.20355
Altem7	.935	.336	2.643	91	.010	.21525
			2.483	38.331	.017	.22904
Altem8	.288	.593	-.920	91	.360	.20647
			-.898	40.939	.374	.21152
Altem9	.000	.985	-.917	91	.362	.20272
			-.914	42.517	.366	.20347
Altem10	.356	.552	.172	91	.864	.22606
			.177	45.589	.860	.21897
Altem11	.033	.857	.705	91	.483	.19436
			.705	42.838	.484	.19431
Altem12	3.046	.084	.101	91	.919	.14502
			.115	56.116	.909	.12791
Altem13	.197	.658	-.040	91	.968	.20412
			-.041	43.455	.968	.20256
Altem14	1.659	.201	1.029	91	.306	.20235
			.984	39.444	.331	.21171
Altem15	.005	.943	-.018	91	.985	.15943
			-.018	40.980	.986	.16324
Altem16	1.909	.170	.727	91	.469	.16666
			.672	37.327	.506	.18024
Altem17	.137	.712	-2.283	91	.025	.15948
			-2.404	47.479	.020	.15148
Altem18	.139	.710	.192	91	.848	.15025
			.185	40.144	.854	.15563
Altem19	4.525	.036	2.644	91	.010	.18692

			2.267	33.408	.030	.21792
Altem20	.160	.690	-1.525	91	.131	.18246
			-1.613	47.962	.113	.17249
Altem21	.103	.749	.328	91	.744	.21507
			.320	40.802	.751	.22074
Altem22	.778	.380	-2.382	91	.019	.21314
			-2.469	45.961	.017	.20564
Altem23	.014	.905	1.313	91	.192	.18989
			1.334	44.156	.189	.18690
Altem24	6.417	.013	-1.372	91	.173	.17275
			-1.615	61.451	.111	.14679
Altem25	.843	.361	-.661	91	.510	.22158
			-.687	46.193	.496	.21326
Altem26	.663	.417	-1.425	91	.157	.19354
			-1.516	48.503	.136	.18201
Altem27	.261	.610	.346	91	.730	.20055
			.338	41.016	.737	.20524
Altem28	.611	.437	-1.172	91	.244	.20873
			-1.116	39.161	.271	.21930
Altem29	2.981	.088	-2.353	91	.021	.19349
			-2.168	37.102	.037	.21004
Altem30	1.466	.229	2.137	91	.035	.21660
			1.985	37.582	.055	.23326
Altem31	.094	.760	-1.173	91	.244	.20504
			-1.178	43.106	.245	.20432
Altem32	.243	.623	-1.614	91	.110	.23101
			-1.556	40.016	.128	.23970
Summary1	**7.364**	**.008**	**-.748**	**91**	**.456**	**.03583**
			-.623	**32.134**	**.538**	**.04303**

Hypothesis Two:

Group Statistics

	Status	N	Mean	Std. Deviation	Std. Error Mean
BItem1	Private Supervisors	68	2.8824	.80167	.09722
	Public Supervisors	25	2.5600	.91652	.18330
BItem2	Private Supervisors	68	2.3235	1.04297	.12648
	Public Supervisors	25	2.4000	.91287	.18257
BItem3	Private Supervisors	68	2.3529	1.14298	.13861
	Public Supervisors	25	2.3200	1.18040	.23608
BItem4	Private Supervisors	68	2.5588	.95233	.11549
	Public Supervisors	25	2.2000	.95743	.19149
BItem5	Private Supervisors	68	2.4853	.74298	.09010
	Public Supervisors	25	2.3600	.70000	.14000
BItem6	Private Supervisors	68	2.3676	.71036	.08614
	Public Supervisors	25	2.5200	.71414	.14283
BItem7	Private Supervisors	68	2.2941	.82965	.10061
	Public Supervisors	25	2.1200	.92736	.18547
BItem8	Private Supervisors	68	2.3676	.87936	.10664
	Public Supervisors	25	2.4400	.91652	.18330
BItem9	Private Supervisors	68	2.2941	.86488	.10488
	Public Supervisors	25	2.4800	.87178	.17436
BItem10	Private Supervisors	68	2.5588	.98318	.11923
	Public Supervisors	25	2.5200	.91833	.18367
BItem11	Private Supervisors	68	2.4559	.60923	.07388
	Public Supervisors	25	2.4800	.65320	.13064
BItem12	Private Supervisors	68	1.9265	.60634	.07353
	Public Supervisors	25	1.9200	.49329	.09866
BItem13	Private Supervisors	68	2.5441	.58422	.07085
	Public Supervisors	25	2.4800	.71414	.14283
BItem14	Private Supervisors	68	2.4853	.68005	.08247
	Public Supervisors	25	2.4400	.82057	.16411
BItem15	Private Supervisors	68	2.1912	.73824	.08952
	Public Supervisors	25	1.9600	.67577	.13515
BItem16	Private Supervisors	68	2.4412	.67762	.08217

	Public Supervisors	25	2.3200	.80208	.16042
BItem17	Private Supervisors	68	2.7059	.57456	.06968
	Public Supervisors	25	2.8400	.55377	.11075
BItem18	Private Supervisors	68	3.1765	.64510	.07823
	Public Supervisors	25	3.2000	.70711	.14142
BItem19	Private Supervisors	68	2.8824	.80167	.09722
	Public Supervisors	25	2.5600	.91652	.18330
BItem20	Private Supervisors	68	2.6618	.82154	.09963
	Public Supervisors	25	2.7200	1.02144	.20429
BItem21	Private Supervisors	68	2.8235	.82753	.10035
	Public Supervisors	25	2.9200	.81240	.16248
BItem22	Private Supervisors	68	2.3088	.88533	.10736
	Public Supervisors	25	2.6400	.86023	.17205
BItem23	Private Supervisors	68	2.5294	.81900	.09932
	Public Supervisors	25	2.3200	.85245	.17049
BItem24	Private Supervisors	68	2.6912	.71774	.08704
	Public Supervisors	25	2.8400	.55377	.11075
BItem25	Private Supervisors	68	2.5735	.96686	.11725
	Public Supervisors	25	2.7200	.89069	.17814
BItem26	Private Supervisors	68	2.4559	.83637	.10142
	Public Supervisors	25	2.5600	.71181	.14236
BItem27	Private Supervisors	68	2.4412	.69930	.08480
	Public Supervisors	25	2.2400	.77889	.15578
BItem28	Private Supervisors	68	3.0441	.55808	.06768
	Public Supervisors	25	3.0800	.64031	.12806
Summary2	**Private Supervisors**	**68**	**2.4224**	**.12942**	**.01570**
	Public Supervisors	**25**	**2.4057**	**.14714**	**.02943**

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	Df	Sig. (2-tailed)	Std. Error Difference
BItem1	2.096	.151	1.654	91	.102	.19495
			1.554	38.314	.129	.20749

BItem2	1.270	.263	-.324	91	.747	.23630
			-.344	48.557	.732	.22210
BItem3	.076	.783	.122	91	.903	.26967
			.120	41.626	.905	.27376
BItem4	.013	.909	1.609	91	.111	.22306
			1.605	42.615	.116	.22362
BItem5	.430	.514	.732	91	.466	.17118
			.753	45.219	.456	.16649
BItem6	.034	.855	-.916	91	.362	.16638
			-.913	42.616	.366	.16680
BItem7	.048	.827	.869	91	.387	.20033
			.825	38.993	.414	.21100
BItem8	.077	.782	-.348	91	.729	.20800
			-.341	41.300	.735	.21206
BItem9	.000	.985	-.917	91	.362	.20272
			-.914	42.517	.366	.20347
BItem10	.356	.552	.172	91	.864	.22606
			.177	45.589	.860	.21897
BItem11	.183	.670	-.166	91	.869	.14528
			-.161	40.328	.873	.15008
BItem12	1.283	.260	.048	91	.962	.13535
			.053	52.289	.958	.12304
BItem13	2.199	.142	.441	91	.660	.14528
			.402	36.472	.690	.15943
BItem14	2.199	.142	.269	91	.789	.16835
			.247	36.810	.807	.18367
BItem15	2.562	.113	1.368	91	.175	.16894
			1.426	46.476	.161	.16212
BItem16	1.909	.170	.727	91	.469	.16666
			.672	37.327	.506	.18024
BItem17	1.762	.188	-1.007	91	.316	.13312
			-1.025	44.271	.311	.13085
BItem18	.539	.465	-.152	91	.880	.15484
			-.146	39.607	.885	.16162
BItem19	2.096	.151	1.654	91	.102	.19495
			1.554	38.314	.129	.20749
BItem20	2.616	.109	-.283	91	.778	.20552
			-.256	36.043	.799	.22729
BItem21	.018	.893	-.501	91	.618	.19263
			-.505	43.534	.616	.19097
BItem22	.719	.399	-1.611	91	.111	.20554
			-1.633	43.944	.110	.20280
BItem23	.100	.753	1.081	91	.282	.19365

			1.061	41.348	.295	.19731
BItem24	2.600	.110	-.938	91	.351	.15866
			-1.057	55.249	.295	.14086
BItem25	.843	.361	-.661	91	.510	.22158
			-.687	46.193	.496	.21326
BItem26	2.387	.126	-.553	91	.582	.18838
			-.596	49.939	.554	.17480
BItem27	.338	.562	1.193	91	.236	.16867
			1.134	39.103	.264	.17736
BItem28	.999	.320	-.264	91	.792	.13587
			-.248	38.210	.806	.14485
Summary2	**.036**	**.849**	**.754**	**91**	**.453**	**.03142**
			.711	**38.480**	**.482**	**.03335**

Hypothesis 3:

Group Statistics

	Status	N	Mean	Std. Deviation	Std. Error Mean
CItem1	Private Supervisors	68	2.2206	.80753	.09793
	Public Supervisors	25	2.6000	.95743	.19149
CItem2	Private Supervisors	68	2.8824	1.00044	.12132
	Public Supervisors	25	2.6400	1.03602	.20720
CItem3	Private Supervisors	68	2.1618	.90785	.11009
	Public Supervisors	25	2.4400	.91652	.18330
CItem4	Private Supervisors	68	2.1471	.96606	.11715
	Public Supervisors	25	2.5200	1.04563	.20913
CItem5	Private Supervisors	68	3.2353	.84849	.10289
	Public Supervisors	25	2.8000	1.04083	.20817
CItem6	Private Supervisors	68	2.1765	1.10550	.13406
	Public Supervisors	25	2.1600	.94340	.18868
CItem7	Private Supervisors	68	2.3824	1.15938	.14060
	Public Supervisors	25	2.5600	1.19304	.23861
CItem8	Private Supervisors	68	2.6029	.90008	.10915
	Public Supervisors	25	2.1200	.97125	.19425
CItem9	Private Supervisors	68	2.3971	.83111	.10079
	Public Supervisors	25	2.0000	.91287	.18257
CItem10	Private Supervisors	68	2.8824	.92283	.11191
	Public Supervisors	25	3.0400	.88882	.17776
CItem11	Private Supervisors	68	2.5588	.99824	.12105
	Public Supervisors	25	2.7200	1.24231	.24846
CItem12	Private Supervisors	68	2.2206	.86120	.10444
	Public Supervisors	25	2.2000	.86603	.17321
CItem13	Private Supervisors	68	2.2941	.86488	.10488
	Public Supervisors	25	2.4800	.87178	.17436
CItem14	Private Supervisors	68	2.3088	1.06865	.12959
	Public Supervisors	25	2.2800	1.02144	.20429
CItem15	Private Supervisors	68	2.3676	.87936	.10664
	Public Supervisors	25	2.4400	.91652	.18330
CItem16	Private Supervisors	68	2.2353	.88297	.10708

	Public Supervisors	25	2.4000	.91287	.18257
CItem17	Private Supervisors	68	1.9412	.97556	.11830
	Public Supervisors	25	2.0000	1.00000	.20000
Summary3	**Private Supervisors**	**68**	**2.4126**	**.21951**	**.02662**
	Public Supervisors	**25**	**2.4353**	**.24725**	**.04945**

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	Df	Sig. (2-tailed)	Std. Error Difference
CItem1	2.307	.132	-1.909	91	.059	.19872
			-1.764	37.282	.086	.21507
CItem2	.165	.686	1.026	91	.308	.23622
			1.009	41.528	.319	.24011
CItem3	.007	.935	-1.307	91	.194	.21288
			-1.301	42.459	.200	.21382
CItem4	.243	.623	-1.614	91	.110	.23101
			-1.556	40.016	.128	.23970
CItem5	2.547	.114	2.061	91	.042	.21125
			1.875	36.382	.069	.23221
CItem6	1.759	.188	.066	91	.947	.24913
			.071	49.803	.944	.23146
CItem7	.011	.918	-.650	91	.517	.27327
			-.641	41.756	.525	.27695
CItem8	.080	.778	2.246	91	.027	.21504
			2.167	40.115	.036	.22282
CItem9	.003	.959	1.989	91	.050	.19961
			1.904	39.541	.064	.20855
CItem10	.000	.989	-.737	91	.463	.21377
			-.750	44.301	.457	.21006
CItem11	4.678	.033	-.645	91	.520	.24981
			-.583	36.020	.563	.27638
CItem12	.045	.832	.102	91	.919	.20173
			.102	42.606	.919	.20225
CItem13	.000	.985	-.917	91	.362	.20272
			-.914	42.517	.366	.20347
CItem14	.196	.659	.117	91	.907	.24708
			.119	44.615	.906	.24192
CItem15	.077	.782	-.348	91	.729	.20800

			-.341	41.300	.735	.21206
CItem16	.118	.732	-.790	91	.431	.20839
			-.778	41.587	.441	.21166
CItem17	.190	.664	-.256	91	.798	.22970
			-.253	41.896	.801	.23237
Summary3	**.228**	**.634**	**-.427**	**91**	**.671**	**.05313**
			-.404	**38.759**	**.689**	**.05616**

Hypothesis 4:

Group Statistics

	Status	N	Mean	Std. Deviation	Std. Error Mean
DItem1	Private Supervisors	68	3.7500	.46920	.05690
	Public Supervisors	25	3.6000	.70711	.14142
DItem2	Private Supervisors	68	3.4559	.72140	.08748
	Public Supervisors	25	3.6000	.64550	.12910
DItem3	Private Supervisors	68	3.5000	.55985	.06789
	Public Supervisors	25	3.5200	.50990	.10198
DItem4	Private Supervisors	68	3.6324	.54374	.06594
	Public Supervisors	25	3.7200	.54160	.10832
DItem5	Private Supervisors	68	3.5882	.49581	.06013
	Public Supervisors	25	3.4800	.50990	.10198
DItem6	Private Supervisors	68	3.4118	.49581	.06013
	Public Supervisors	25	3.4000	.50000	.10000
DItem7	Private Supervisors	68	3.6324	.57053	.06919
	Public Supervisors	25	3.7200	.45826	.09165
DItem8	Private Supervisors	68	3.5294	.55907	.06780
	Public Supervisors	25	3.8000	.40825	.08165
DItem9	Private Supervisors	68	3.7794	.45205	.05482
	Public Supervisors	25	3.6000	.50000	.10000
DItem10	Private Supervisors	68	3.5294	.50285	.06098
	Public Supervisors	25	3.5200	.50990	.10198
Summary4	**Private Supervisors**	**68**	**3.5809**	**.21528**	**.02611**
	Public Supervisors	**25**	**3.5960**	**.18138**	**.03628**

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	Sig. (2-tailed)	Std. Error Difference
DItem1	7.326	.008	1.183	91	.240	.12681
			.984	32.098	.332	.15244
DItem2	1.601	.209	-.878	91	.383	.16423
			-.924	47.513	.360	.15595
DItem3	.778	.380	-.156	91	.876	.12797
			-.163	46.702	.871	.12251
DItem4	.995	.321	-.690	91	.492	.12705
			-.691	42.969	.493	.12681
DItem5	.694	.407	.926	91	.357	.11685
			.914	41.777	.366	.11839
DItem6	.043	.836	.101	91	.920	.11623
			.101	42.500	.920	.11668
DItem7	2.477	.119	-.690	91	.492	.12705
			-.763	52.984	.449	.11483
DItem8	19.760	.000	-2.210	91	.030	.12245
			-2.550	58.535	.013	.10613
DItem9	5.007	.028	1.649	91	.103	.10880
			1.573	39.320	.124	.11404
DItem10	.021	.885	.080	91	.937	.11805
			.079	42.293	.937	.11882
Summary4	**1.542**	**.217**	**-.312**	**91**	**.755**	**.04839**
			-.338	**50.449**	**.737**	**.04469**