Journal of Management and Science

12(3) 2022 71-85

OPEN ACCESS

RESEARCH ARTICLE

DOI: https://doi.org/10.26524/jms.12.48

An Investigation Into The Soft Skills Required Of Potential Building Graduate Employee For Sustainable Employment

Ojo, Samson Abayomi [1], E.A.O. Anaele [2] , H.O. Omeje [3]

Abstract

This study investigated the soft skills that Building Technology Students need for sustainable employment in Building Construction Industry. The study answered four research questions and tested four null hypotheses at 0.05 level of significance. The study adopted descriptive survey research design and was carried out in South-West, Nigeria. The population for the study was of 197 comprising of 159 employers from registered building construction industry and 38 building technology teachers from Building Technology Department in Polytechnics in South-West, Nigeria. There was no sampling for the study since the entire population was used. The instrument that was used for collecting data for the study was a structured questionnaire. The questionnaire was divided into two parts, I and II. Part I contains items that elicited the demographic information of the respondents while part II contains 62 soft skills items in four sections (A, B, C and D) on a five point likert-type rating scale option of Extremely Needed (EN), Somewhat Needed (SN), Neither Needed or Not Needed (NN), Somewhat Not Needed (SN) and Extremely Not Needed (EN) with a corresponding value of 5, 4, 3, 2 and 1 respectively. The face validation of the instrument was carried out by five experts. The Cronbach alpha coefficient (⍰) method was used to ascertain the internal consistency of the questionnaire items and it yielded an overall reliability coefficient of 0.88. Data generated from the administration of the questionnaire was analyzed with Statistical Package for Social Sciences (SPSS) using mean and t-test statistics to answer the research questions and hypotheses respectively at 0.05 level of significance. Findings revealed that personal-attribute skills, people-related skills, higher-order thinking skills and career-attribute skills are required by building technology students in Polytechnics for sustainable employment in building construction industry. Based on the findings of the study, appropriate conclusions and recommendations were made which include the integration of the identified soft skills into the curriculum of building technology programme in Polytechnic among others.

Keywords: Soft skills, potential building graduate employee, sustainable employment.

Author Affiliation: [1] Department of Industrial Technical Education, University of Nigeria, Nsukka

Corresponding Author: Ojo, Samson A, Department of Industrial Technical Education, University of Nigeria, Nsukka

Email: samson.ojo@unn.edu.ng

How to cite this article: Ojo, Samson, E.A.O. Anaele, H.O. Omeje. A. An investigation into the soft skills required of potential building graduate employee for sustainable employment, Journal of Management and Science, 12(3) 2022 71-85. Retrieved from https://jmseleyon.com/index.php/jms/article/view/582

Received: 17 February 2022 **Revised:** 19 March 2021 **Accepted:** 4 April 2022

1. Introduction

Building is a structure made by man for dwelling and other activities. The Federal Emergency Management Agency (FEMA) [1] described building as a structure enclosed for human habitation. Apart from human habitation, building serves various purposes for man and the environments. A building consists of walls, floor and roof erected to enclose space for different purposes. [2] The study of building and the technology of its construction is known as Building Technology. Building Technology is a course which deal with the study of the total process of constructing buildings using standardized and acceptable materials. According to the Federal Republic of Nigeria (FRN) [3] Building Technology widens the intellectual capacity of an individual and equips the individual with the skills necessary for technological advancement. The knowledge and skills of buildings are imparted in students by highly trained Building Technology teachers in higher institutions. Building Technology teachers as used in this study refer to lecturers and instructors that have been trained to impart in Building Technology students the knowledge and skills regarding the entire process of constructing building. Building Technology teachers are staff domicile in any Building Technology Department in higher institutions such as the Polytechnics.

Polytechnic is a training institution set up to produce technicians and technologists in various fields. Polytechnic according to the National Board for Technical Education (NBTE) [4] is an academic and technical institution that offers Technical Education leading to the production of graduates who have knowledge and skills to function as Technicians, Technologists or Professionals, depending on the level of training in their fields of specialization at National Diploma (ND) and Higher National Diploma (HND) levels. Building Technology being an integral part of the Technical Education programme in Polytechnics consists of courses which include but not limited to building construction, building science and properties of materials, workshop practice and technology, architectural design and drawing, surveying, structural mechanics, tendering and estimating and other related general education courses .[5] Successful completion of these courses by Building Technology students will lead to graduation from the Polytechnic. A Building Technology student in the context of this study, is a potential graduate employee who is still undergoing an educational training

at the Polytechnic for a period of two years at the National Diploma and Higher National Diploma levels respectively and upon graduation from the Polytechnic, the student is expected to secure sustainable employment as well as make advancement in the Building Construction Industry.

Employment is the condition of having a paid job while sustainability refers to the ability of something to continue for a long time without hampering the future. Caleb and Udofia [6] defined sustainable employment as the relative chance of an individual in getting and maintaining a job. Mansour and Dean [7] described the ability of graduates to adequately use their knowledge, skills and attitudes in securing and advancing in the world of work as sustainable employment. A Building Technology student is expected to be self-employed or secure employment upon graduation from the Polytechnic as well as make advancement in the Building Construction Industry which means that the employment secured is sustainable in the industry. Sustainable employment in the context of this study refers to the ability of a building technology student to secure a paid job in the Building Construction Industry after graduation from the Polytechnic, maintain it without being laid off in the future and make advancement that leads to self fulfilment in the industry. This is in line with one of the objectives of the Polytechnic as stated in the report of the National Steering Committee on the Development of National Vocational Qualifications Framework (NVQF) for Nigeria, which is the provision of manpower for industries by equipping students with skills (hard skills) necessary for gaining employment (National Board for Technical Education (NBTE). [8] This objective is however still being defeated to a large extent because there has been a paradigm shift in the requirements for securing employment in the Building Construction Industry.

Building Construction Industry deals with the entire process of constructing buildings using new developments in technology and related sciences to enhance the design, construction and performance of buildings. The Building Construction Industry as described by Agbo [9] is a construction firm that deals with the construction of all forms of buildings. The construction industry comprises firms involved in the erection of different types of buildings as well as other forms of construction works ranging from structural, civil and other related construction activities. [10] There are various trades in the Building Construction Industry, they include but not limited to Carpentry and Joinery, Painting and Decoration, Plumbing, Tiling, Block/Brick laying and Concreting. Adesanya [11] stated that one of the major objectives of the Building Construction Industry is the enhancement of the performance of buildings for optimum satisfaction of occupants as well as ensuring the construction of buildings that are easy to manage and maintain. In other to achieve this objective, the employers in Building Construction Industry usually engages the services of personnel such as Building Technology graduates from the Polytechnic (building technician and building technologist), Craftsmen, Architects, Quantity Surveyors, Structural Engineers and Civil Engineers among others. Employers in the context of this study refer to administrative and managerial staff that are in charge of planning, organizing, controlling, coordinating and assessing the entire construction process and activities using human and material resources in other to ensure that buildings are constructed to meet up its functional requirements and perform optimally in building construction industry. Johani and Bhebhe [12] stated that employers are also managerial staff and they include executives, directors, managers and supervisors in the building construction industry. In this study, the words 'employer' and 'managerial staff' have the same meaning. Such understanding is consistent with Nigeria's Labour Act which agrees that managerial staff represent the employer and therefore they are employers. The Labour Act (Chapter 28:01) of 2006 defines an “employer” as any person whatsoever who employs or provides work for another person and remunerates or expressly or tacitly undertakes to remunerate the person; and in general, managerial employees do this. One of the requirement employers uses in offering job to people in building construction industry is the possession of relevant knowledge and technical (hard) skills.

Technical skills used to be the only major skills for employment in the Building Construction Industry in the 20th century. Paolini [13] reported that in the 20th century the major criteria that determine work performance and success was hard skills. There has however been a change in skills demand in the Building Construction Industry in the 21st century. Marcel [14] stated that hard skills being the only requirement for securing employment before is no longer enough today. This change in skills demand has been on the increase recently [15] and this is as a result of changes in output demand, industrial sector reforms, change in the nature of work, technological changes, globalization and the desire to eliminate unwanted segment from the pool of available unemployed graduates. [16,17] Mansour and Dean [18] stated that the Building Construction Industry has today changed from product to service industry thus, requiring graduates with good soft skills for excellent service delivery.

Soft skills are known by different names across the globe. Soft skill is a sociological term referring to a person’s Emotional Intelligence Quotient (EIQ) which is a conglomeration of the way the person behaves, show optimism and relate with others in a workplace.[19,20] Soft skills are job behaviors expected of an employee in the 21st century Building Construction Industrys’ workforce. Paolini [21] and Rouse [22] stated that soft skills are a persons’ personality traits, interpersonal relations, facility with language, personal attributes, career attributes, friendliness, and optimism that enhance the person’s job performance; including ability to empathize with others and negotiate contract. This implies that soft skills are attributes that characterize commitment to the job as well as enhance work performance and are capable of making a job seeker stand out among other job seekers. Soft skills in the context of this study refer to the ability of a Building Technologist/ Technician in the Building Construction Industry to be able to manage self and relate with other members of the construction team, solve emerging construction problems and produce results geared towards the actualization of Building Construction Industry set goals and objectives.

Soft skills are not entirely independent in the Building Construction Industry, they are applied hand-in-hand with hard skills. This is because building construction activities are interrelated and so, a good soft skill is needed by workers to maintain good line of communication and work as a team. Johani and Bhebhe [23] affirmed that soft skills complement

academic achievement and form the bedrock through which the application of hard job-specific skills are made possible. Soft skills are important for Building Technology students (potential graduate employees/technologists) in securing and sustaining employment in the Building Construction Industry. Sharifah, Hanipah and Shahbodin [24] stated that soft skills are special abilities that can improve employment chances and enhance workplace success. Lippman, Ryberg, Carney and Moore [25] reported that students need soft skills to understand work environment and work with colleagues in other to succeed in the 21st Century workforce. This implies that, building technology students need to acquire soft skills before graduating from the Polytechnics because the business of constructing buildings cannot be completed by a single individual. Kamenetz [26] explained that students must combine soft skills with hard (technical) skills effectively in other to be successful in the construction workforce. Soft skills are as important as hard skills in the employment process and constitutes a major part of technical job requirements. [27,28] Therefore, Building Technology students need to acquire soft skills to boost their employment chances.

Soft skills have various components as it applies to Building Construction Industry. It cuts across both the affective and cognitive domain. [29] Soft skills are behavioural competencies in workplace which include people, personal attribute and career attribute skills. [30,31,32] Soft skills needed in the workplace are numerous but it has been categorized under the following key components; basic/fundamental skills, people-related skills, conceptual/thinking skills (higher-order thinking), personal skills and attributes, skills related to the business world (career-related skills) and skills related to the community National Centre for Vocational Education Research . [33] However, this study will only confine itself to the personal-attribute skills, people-related skills, higher-order thinking skills and career attribute skills as it applies in the Building Construction Industry.

Personal-attribute skills refer to skills needed for effective management of oneself at work which enhance one's personality. These skills include skills in; time management, being responsible and resourceful, self-confident, optimism, common sense, responsibility, a sense of humour and integrity. [34] These skills are essential because efficient management of oneself will help in relating properly in the workplace which will enhance work success. Prasanta [35] stated that when it comes to growing in an organization, it is the personality that matters especially in large organizations where several people with similar technical expertise will compete for a promotion. This implies that personal attribute skills are essential in the workplace and are good enhancement for exhibiting people-related skills.

People-related skills refer to the abilities of an individual to be able to deal with people politely and relate well with others at work. The people in a workplace include, employers, clients, co-employees and visitors. People-related skills are a major part of soft skills [36] and refers to interpersonal qualities that determine a person's relationship with colleagues at work.[37] These skills help to enhance good attitudes, communicate efficiently, interact well, and manage situations among others. People-related skills help in promoting positive attitude, effective communication, respectful interaction and the ability to remain composed in difficult situations. [38] An employee's ability to be composed in difficult situation and achieving excellence in Building Construction Industry demands higher-order thinking skills.

Higher-order Thinking skills refer to the ability of an individual to understand the peculiarities in different emerging challenges in the workplace, think logically and critically and organize such thought in a creative and innovative way as well as take appropriate decision that will enhance solution to such problems which will in turn lead to the achievement of organization's set goals and objectives. According to Flynn and Thomasson [39] higher order thinking skills involve skills required in critical thinking, planning, collecting and organizing information, taking decision and solving problems. These higher order thinking skills will help foster the development of positive career-attribute skills.

Career-attribute skills are those abilities required of an employee in the workplace that is peculiar to the employee's profession. Career attribute skills include leadership, work ethics, adaptability and customer service. [40] These skills change from work to work and are needed to navigate the world of work. The world of work is dynamic and has employees from varying socio-economic background that must be dealt with on a day to day basis. However, in an increasingly interdependent world of work, employees need career attribute skills to relate and interact with clients from different backgrounds and heterogeneous groups, meet their individual needs without hampering their professional ethics. This shows the importance of soft skills in Building Construction Industry. [41]

However, as important as soft skills are in Building Construction Industry it is not taught in the Polytechnics. Sodipo stated that personal attribute, people-related, higher order thinking and career attribute skills that employers want graduates to be equipped with are not contained in Building Technology curriculum in the Polytechnic. This has created gap in Building Technology graduate's ability to secure a sustainable employment in Building Construction Industry. It is against this backdrop that this study seeks to identify the soft skills needed by Building Technology students for sustainable employment in Building Construction Industry. [42]

2. Statement of the Problem

The issue of employment and its sustainability has been and still remains a major challenge among graduates and a major worry for potential graduate employees (students) in Nigeria. Unemployment has today become more worrisome for Government and stakeholders in the Educational sector. The Building Technology students are not exempted as they always face difficult challenges in getting employment and sustaining it in the Building Construction Industry upon graduation from the Polytechnics. Employment into the Building Construction Industry in the 20th century was majorly based on the hard (technical) skills possessed by job applicants. Researchers stated that the major criteria that determine work performance and success in the 20th century was technical skills. There has however been a paradigm shift in the requirements for entering into the Building Construction

Industry in the 21st century. This shift has resulted in growing demand for potential Building Technology graduate to be equipped with more than hard skills. Researchers emphasized the need for building technology students to be equipped with soft skills in other to increase their chances of getting employment and meeting the demands of today's Building Construction Industry.

The Building Construction Industry today employs only graduates with a combination of soft and hard skills with premium on soft skills. Employers in Building Construction Industry have reiterated that they prefer graduate who has efficiency in soft skills as well as sound technical knowledge for employment. Regrettably, many Building Technology students that has graduated fall victim of these soft skills shortage because the curriculum they were trained on in the Polytechnics do not contain soft skills. This made the graduates to be ignorant of the soft skills demand of the Building Construction Industry and therefore could not secure employment. Researchers equally reported that the outcome of several interview session with some employers revealed that lack of soft skills were the main reason that many Building Technology graduates were unemployed. Some Building Technology graduates recently employed end up dismissed by the employers, which could be attributed to non-possession of the requisite soft skills needed in sustaining the job in the Building Construction Industry.

Unfortunately, soft skills are yet to be integrated into the curriculum of Building Technology in Polytechnics despite being a major skill requirement for securing, sustaining and advancing in the world of work in the 21st century. This is however not connected to the fact that the importance of soft skills in Building Construction Industry is not known but the exact soft skills needed for sustainable employment in Building Construction Industry could still be largely unknown. There is therefore a need for the Polytechnics to identify and place greater emphasis on the soft skills needed by employers in Building Construction Industry in the curriculum which is the crux of this study since securing and succeeding in Building Construction Industry today is based on acquisition of soft and hard skills.

3. Purpose of the Study

The general purpose of this study is to determine the soft skills that Building Technology Students need for sustainable employment in Building Construction Industry. Specifically, the study determined the;

Personal-attribute skills needed by building technology students for sustainable employment in building construction industry.

People-related skills needed by building technology students for sustainable employment in building construction industry.

Higher-order thinking skills needed by building technology students for sustainable employment in building construction industry.

Career-attribute skills needed by building technology students for sustainable employment in building construction industry.

4.Research Questions

The following research questions are posed to guide the study.

What are the personal-attribute skills needed by building technology students for sustainable employment in building construction industry?

What are the people-related skills needed by building technology students for sustainable employment in building construction industry?

What are the higher-order thinking skills needed by building technology students for sustainable employment in building construction industry?

What is the career-attribute skills needed by building technology students for sustainable employment in building construction industry?

5.Hypotheses

The following null hypothesis will be tested at 0.05 level of significance;

There will be no significance difference in the mean responses of teachers of building technology and employers in the building construction industries on the personal-attribute skills that are needed by building technology students for sustainable employment in building construction industry.

Significant difference does not exist in the mean responses of teachers of building technology and employers in the building construction industries on the people-related skills that are needed by building technology students for sustainable employment in building construction industry.

There is no significance difference in the mean responses of teachers of building technology and employers in the building construction industries on the higher-order thinking skills that are needed by building technology students for sustainable employment in building construction industry.

There will be no significance difference in the mean responses of teachers of building technology and employers in the building construction industries on the career-attribute skills that are needed by building technology students for sustainable employment in building construction industry.

6.Method

The study adopted descriptive survey research design. A descriptive survey research design according to Nworgu is one in which the entire population or representative sample is studied by collecting and analyzing data from a group through the use of research instrument such as questionnaire. The design was considered appropriate for this study because the study elicited opinion of employers in building construction industry and building technology teachers on the soft skills, they consider essential for building technology students in Polytechnics for securing sustainable employment in building construction industry. The area of the study was South-west, Nigeria. The population for this study was 197, comprising 159 employers of Building Technology graduates and 38 building technology teachers in Polytechnics. The employers in building construction industries and building technology teachers were considered suitable to respond to this questionnaire because they are experts in the field. There was no sampling because of the small size of the population. The instrument that was used for collecting data for the study was a structured questionnaire titled: Building Technology Soft Skills Questionnaire (BTSSQ)

developed by the researcher after extensive review of extant literatures on soft skills. The questionnaire is divided into two parts, I and II (see appendix D, page 124). Part I contains items that elicited the demographic information of the respondents. Part II contains 62 items on soft skills and is divided into four sections (A, B, C and D). Section A contains 17 items designed to find out the personal-attribute skills, section B contains 15 items designed to find out the people-related skills, section C contains 15 items designed to find out the higher-order thinking skills and section D contains 15 items designed to find out the career-attribute skills. The questionnaire was based on a five-point Likert-type scale of Extremely Needed (EN), Somewhat Needed (SN), Neither Needed or Not Needed (NN), Somewhat Not Needed (SN) and Extremely Not Needed (EN) with a corresponding value of 5, 4, 3, 2 and 1 respectively. The instrument, BTSSQ was face validated by five experts; three from the Department of Industrial Technical Education, University of Nigeria, Nsukka and two from registered building construction companies in Ondo and Ekiti States. Each expert was served a copy of the questionnaire and was asked to identify ambiguities and give suggestions for improving the instrument towards meeting the objectives of the study. The experts assessed the instruments and ensured that the items were clearly stated and appropriate for the stated research questions and hypotheses. This is in line with Nworgu (2015) who asserted that validity is the degree to which a test measures what it is designed to measure. Therefore, the comments, suggestions, and criticisms made independently by the experts helped the researcher to modify and produce the final draft of the instrument. The Cronbach alpha coefficient (∝) method was used to ascertain the internal consistency of the questionnaire items. It was obtained by administering the questionnaire on five building technology teachers in Kwara State Polytechnics and 15 employers in building construction industry in Kwara State which is outside the study area but have similar features to the studied area. This is in line with Uzoagulu (2011) that the reliability of an instrument is the consistency of the instrument in measuring whatever it purports to measure. The data from the preliminary study was analyzed using Statistical Package for Social Sciences (SPSS) to determine the reliability coefficient of the instrument. Chronbach Alpha Coefficient method was then applied to determine the internal consistency of the instrument. The reliability values obtained were 0.84, 0.90, 0.88 and 0.90, for research questions 1-4 respectively. Overall reliability of the instrument was 0.88 indicating a reliability coefficient of the instrument. One hundred and ninety-seven copies of the questionnaire were administered on employers in registered building construction industry and building technology teachers in Polytechnics by the researcher with the help of two research assistants (one in each State) through personal contact. The research assistants were properly briefed on the objectives of the study in other to keep them abreast of the importance of the study as well as to ensure appropriate administration, safe handling and high return rate of the instrument. The research assistants were given two weeks to administer and collect the copies of the questionnaire in their respective States while the researcher went round during the third week to retrieve the copies of the instrument from the research assistants at designated places. Ninety-three percent (183) out of the copies of the questionnaire administered (197) were retrieved. The data collected for this study were analyzed using mean and t-test. The mean was used to answer the research questions while the t-test was used in testing the hypotheses at 0.05 level of significance. The following real limits of numbers of the respective nominal values of the five-point scale were used for the interpretation of the calculated means and answering of the research questions accordingly;

Scale Point	Nominal Value	Real limits
Extremely Needed (EN)	5	4.50 – 5.00
Somewhat Needed (SN)	4	3.50 – 4.49
Neither Needed or Not Needed (NN)	3	2.50 – 3.49
Somewhat Not Needed (SN)	2	1.50 – 2.49
Extremely Not Needed (EN)	1	0.50 – 1.49

In the hypotheses, any item where calculated significant (2-tailed) value is greater than 0.05, hypotheses of no significant difference was upheld at 0.05 level; but where the calculated significant (2-tailed) value is less or equal to 0.05, hypotheses of no significant difference was rejected at .05 level of significance. The computation of the mean and t-test was carried out using Statistical Package for Social Sciences (SPSS) version 22.

7.Results

The data presented in Table 1 above revealed that items 1, 3, 4, 7, 8, 9, 10, 12, 13, 15, 16 and 17 had means above 4.50, indicating that the respondents regarded them as 'extremely needed' by building technology students in Polytechnic for sustainable employment in building construction industry in Ondo and Ekiti States. In the same vein, items 2, 5, 6, 11 and 14 had mean ranging from 4.38 to 4.49 showing they were seen to be 'somewhat needed' by building technology students in Polytechnic for sustainable employment in building construction industry in Ondo and Ekiti States. The Table also showed that the standard deviations (SD) of all the items are within the range of 0.52 to 0.84. This indicated that the respondents were not very far from one another in their responses.

The mean value of items 18, 20, 22, 23, 25, 26, 28, 29, 30, 31 and 32 as presented in Table 2 falls between 4.50 to 5.00. This indicates that the skills items are 'extremely needed' by building technology students in Polytechnic for sustainable employment in building construction industry in Ondo and Ekiti States. On the other hand, items 19, 21, 24 and 27 were regarded by the respondents to be 'somewhat needed' by building technology students in Polytechnic for sustainable employment in building construction industry in Ondo and Ekiti States. This is because their mean responses falls within 3.50 to 4.49 on the scale. Meanwhile, all the items had their standard deviations (SD) ranging from 0.53 to 0.84 which implies that the respondents are very close to one another in their responses.

The result presented in Table 3 above showed that 10 items on the higher-order thinking skills are 'extremely needed' by building technology students in Polytechnic for sustainable employment in building construction industry in Ondo and Ekiti States while five items are 'somewhat needed'.

This is because the mean of the items range from 4.50 to 5.00 and 3.50 to 4.49 respectively. The standard deviations (SD) of all the items which range from 0.64 to 0.86 as shown also in the Table, indicates that the respondents were not entirely different in their opinions.

The data in table 4 as shown above revealed that the mean of all the 15 items range from 4.50 to 4.81 which falls within 4.50-5.00 on the scale. This showed that the mean value of each of the item was above the 4.50, indicating that all the career-attribute skills items are 'extremely needed' by building technology students in Polytechnic for sustainable employment in building construction industry in Ondo and Ekiti States. The Table also showed that the standard deviations (SD) of the items are within the range of 0.48 to 0.83 and are positive. This indicated that the respondents were not very far from one another in their responses.

Table 5 presents the t-test analysis of the responses of building technology teachers and employers in building construction industry on the personal-attribute skills needed by building technology students for sustainable employment in the building construction industry. The data revealed that items 5, 6, 9, 13 and 14 had probability values of .00, .03, .01, .02, and .00 respectively, which were less than the probability value of 0.05. This implies that there is a significant difference in the mean responses of respondents on items 5, 6, 9, 13 and 14 of the personal-attribute skills needed by building technology students for sustainable employment in building construction industry. Therefore, the null hypothesis of no significant difference was rejected for those items. On the other hand, items 1, 2, 3, 4, 7, 8, 10, 11, 12, 15, 16 and 17 had probability values ranging from .06 to .10 which are higher than the probability value of 0.05. This indicated that, the null hypotheses of no significant difference in the mean responses of building technology teachers and employers in building construction industry on the personal-attribute skills needed by building technology students for sustainable employment in building construction industry is accepted for the items.

The t-test analysis of the responses of respondents on the people-related skills needed by building technology students for sustainable employment in building construction industry as presented in Table 6 revealed that items 23, 27, 29, 31 and 32 with probability values of .03, .04, .01, .00 and .03 respectively are less than the probability value of 0.05. This implies that there is a significant difference in the mean responses of building technology teachers and employers in building construction industry on items 23, 27, 29, 31 and 32 of the people-related skills needed by building technology students for sustainable employment in building construction industry. Therefore, the null hypothesis of no significant difference was rejected for those items. On the contrary, items 18, 19, 20, 21, 22, 24, 25, 26, 28 and 30 had probability values ranging from .06 to .30 which are higher than the probability value of 0.05. Therefore, the null hypotheses of no significant difference in the mean responses of building technology teachers and employers in building construction industry on items 18, 19, 20, 21, 22, 24, 25, 26, 28 and 30 of the people-related skills needed by building technology students for sustainable employment in building construction industry for those items is accepted.

The data shown in Table 7 above revealed that items 34, 38, 44, 45 and 46 with probability values of .00, .04, .01, .04 and .02 respectively are less than the probability value of 0.05 indicating that there is a significant difference in the mean responses of building technology teachers and employers in building construction industry on items 34, 38, 44, 45 and 46 of the higher-order thinking skills needed by building technology students for sustainable employment in building construction industry. Therefore, the null hypothesis of no significant difference was rejected for those items. Similarly, items 33, 35, 36, 37, 39, 40, 41, 42, 43 and 47 on the Table had probability values ranging from .06 to .43 which is higher than the probability value of 0.05. This shows that, the null hypotheses of no significant difference in the mean responses of the respondents on the higher-order thinking skills needed by building technology students for sustainable employment in building construction industry for those items is accepted.

Table 8 shows that items 49, 52, 54, 59, 61 and 62 with corresponding probability values of .02, .02, .03, .01, .03 and .02 are less than the probability value of 0.05. On the other hand, items 48, 50, 51, 53, 55, 56, 57, 58 and 60 had probability values ranging from .06 to .34 which are higher than the probability value of 0.05. This implies that while respondents differ in their opinions on some of the career-attribute skills items (items 49, 52, 54, 59, 61 and 62) needed by building technology students for sustainable employment in building construction industry, they do not differ on some of the items (items 48, 50, 51, 53, 55, 56, 57, 58 and 60). Therefore, the null hypotheses of no significant difference in the mean responses of building technology teachers and employers in building construction industry on the career-attribute skills needed by building technology students for sustainable employment in building construction industry was rejected for items 49, 52, 54, 59, 61 and 62 while it was accepted for items 48, 50, 51, 53, 55, 56, 57, 58 and 60.

8.Discussion

The findings of this study revealed that all the 17 items on personal-attribute skills are needed by building technology students for sustainable employment in building construction industry. This shows that personal-attribute skills is one of the major skill requirement that characterized securing and sustaining employment in the building construction industry, and as such it should be acquired by building technology students in the Polytechnics. The findings are in line with Aworanti (2012) who stated that personal attribute skills such as skills in; been responsible and resourceful, showing self-confident, optimism, common sense, responsibility, a sense of humour and integrity are needed for effective management of oneself at work and for enhancement of one's personality. These skills deal with an employee's character, which are developed and modified accordingly for optimum building construction work performance and relationship with other people at building construction workplace. Andor (2016) emphasized that a good personal attribute skill protrudes a person's image and enhance the persons' personality at work or other places. The findings also revealed many personal attribute skills needed by building technology

students which are in tandem with Kamenetz (2015) who posited that personal-attribute skills involve ability to persevere, display self-control and be conscientious. Similarly, Prasanta (2014) reported that when it comes to growing in an organization, it is the personality that matters especially in large organizations where several people with similar technical expertise will compete for a promotion. There is therefore no doubt that personal attribute skills protrude a person's image and enhance the persons' personality at work or other places. The result of the analysis revealed that significant difference does not exist in the mean responses of teachers of building technology and employers in the building construction industries on the personal-attribute skills needed by building technology students for sustainable employment in building construction industry for 12 items. Therefore, the stated hypothesis of no difference was upheld for the 12 items. However, significant difference exists in the mean responses of the teachers and employers which led to the rejection of the stated hypothesis of no difference for five items. This indicated that, the work nature of the two groups of respondents had a little impact on their opinion with respect to some of the personal-attribute skills items that building technology student need for sustainable employment in building construction industry.

This study revealed 15 people-related skills that are needed by building technology students for sustainable employment in building construction industry. This shows that it is important for building technology students in polytechnic to acquire people-related skills in other to work with others effectively in building construction's workplace since the job of constructing a building cannot be completed by a single individual. This finding is in consonance with Doyle (2015) who reported that employers look for those who can function as a part of a team and can balance personal achievements with group goals. Furthermore, Marcel (2012) who stated that people-related skills help in promoting positive attitude, effective communication, respectful interaction and the ability to remain composed in difficult situations is also in accordance with the findings of this study. Lippman, Ryberg, Carney and Moore (2015) reported that an international survey of 380 employers revealed that undergraduates between ages 15 to 29 require "soft skills" to understand work environment, work with colleagues, do well, and achieve organization's goals so as to succeed in the 21st Century workforce. Therefore, students need to learn about the principles of fairness, relationship maintenance and seeking a mutually beneficial outcome for all parties involved in the workplace (Spiers, 2012). The result of the analysis also revealed that significant difference does not exist in the mean responses of teachers of building technology and employers in the building construction industry on the people-related skills needed by building technology students for sustainable employment in building construction industry for 10 items. Therefore, the stated hypothesis of no difference was upheld for the 10 items. However, there is a significant difference in the mean responses of the respondents which led to the rejection of the null hypothesis for five items. This signifies that the work nature of the two groups of respondents had little impact on their opinion with respect to some of the people-related skills items that building technology students need for sustainable employment in building construction industry.

The findings of this study showed that 15 higher-order thinking skills are needed by building technology students for sustainable employment in building construction industry. These skills are needed in solving construction-based problem in an innovative way. This is in agreement with Aworanti (2012) who stated that higher-order thinking skills include a person's skills set and ability to perform a certain type of task or activity that is geared towards solving a unique problem. According to Cleary, Flynn and Thomasson (2006); NCVER (2003), higher-order thinking skills involve skills in critical thinking, creativity, planning, collecting and organizing information, taking decision, solving problems, adapting to change and learning how to learn. This shows that there is the need for building technology students in polytechnic to acquire higher-order thinking skills in other to understand the peculiarities in different emerging challenges in the workplace, think logically and critically and organize such thought in a creative and innovative way as well as take appropriate decision that will enhance solution to such problems leading to the achievement of the goals and objectives in building construction's workplace. The United States Department of Labor (2013) also reported in line with the findings of this study that effective critical thinkers are able to pull together data and solve problems in a logical and systematic manner.

The result of the analysis also indicated that the work nature of building technology teachers and employers in building construction industry had impact on their opinion with respect to some of the higher-order thinking skills items that building technology students need for sustainable employment in building construction industry. This is because while significant difference does not exist in the mean responses of teachers of building technology and employers in the building construction industries on the higher-order thinking skills needed by building technology students for sustainable employment in building construction industry for 10 items, significant difference exist in the mean responses of the respondents on five items. This led to the acceptance of the hypothesis of no significance difference for the 10 items and rejection of the hypothesis of no significance difference for the five items accordingly.

This study revealed that 15 career-attribute skills that are needed by building technology students for sustainable employment in building construction industry. The findings show that building technology students need career-attribute skills in other to navigate the world of work especially the building construction industry. This means that there is need for building technology students in Polytechnic to acquire career-attribute skills in other to have a better understanding and sustain employment in building construction's workplace. These findings were in agreement with the report in the Occupational Outlook Handbook (2012) that, in an increasingly interdependent world of work, employees need career attribute skills when meeting with clients from different backgrounds and heterogeneous groups in other to cater for their individual needs without hampering professional ethics. Laker and Powell (2011) also posited in line with the findings of this study that, students who possess career-attribute skills will have an improve workplace performance, in that they will be motivated, delegate tasks effectively, demonstrate

positivity and optimism in achieving organization goals, will be trustworthy and respected, will provide constructive feedback, will be committed and flexible in accepting changes. The study shows that employers are looking for employees who have a motivating spirit which is a valuable asset for their company in regards to persuading, empowering, and identifying the strengths in others in order to get a task done efficiently. The skills highlighted in this study are similar to James & James, 2004 who stated that career attribute skills include leadership, work ethics, adaptability and customer service. Although, the result of the analysis revealed that significant difference does not exist in the mean responses of teachers of building technology and employers in the building construction industries on the career-attribute skills needed by building technology students for sustainable employment in building construction industry for nine items while significant difference exist in the mean responses of the respondents on six items. This can be attributed to the diversity in the work nature of the respondents which has had a little impact on their opinion with respect to some of the career-attribute skills items that building technology students need for sustainable employment in building construction industry.

9.Implications of the Study

The findings of this study has a lot of implications for the Federal Government of Nigeria, National Board for Technical Education, Technical and Vocational Education planners and administrators, building technology teachers and students.

Until soft skills such as personal-attribute skills, people-related skills, higher-order thinking skills and career-attribute skills are integrated into the curriculum of building technology in the Polytechnic, building technology students will continue to face difficult challenge in securing sustainable employment in building construction industry. This will continue to lead to youth restiveness and promote a lot of social vices among graduates. The nation's economy will also continue to suffer a huge setback as many of the graduates won't be able to contribute to the development of the nation's growth and development. The rate of dependency will also continue to be on the increase and the imminent danger of poverty will be on the rise placing Nigeria in a bad spot light within the comity of nations.

The implications of this study will greatly serve as a challenge to National Board for Technical Education (NBTE). This is based on the fact that the non-implementation of the findings and recommendations of this study will continue to affect the ability of building technology graduates in securing sustainable employment in building construction industry. Therefore, the goal of establishing the Polytechnic will continue to suffer defeat. Furthermore, there might be reduction in the rate of enrolment of students for building technology programme in the Polytechnic as a result of lack of assurance of earning a worthwhile living upon graduation from the Polytechnic which may lead to retrenchment of building technology teachers in the Polytechnic.

Table 1

Mean Responses of the Respondents on the Personal-attribute Skills Needed by Building Technology Students for Sustainable Employment in Building Construction Industry

(N=183)

S/N	Item Statement	Mean	SD	Decision
1	Ability To Manage Self While Handling Building Construction Works	4.84	.53	EN
2	Ability To Keep Learning On Integrating Emerging Technologies In Building Construction For Optimum Building Performance	4.38	.76	SN
3	Exhibiting high self-esteem while dealing with people involved in building construction works	4.51	.78	EN
4	Ability to deal with building construction work pressure	4.52	.83	EN
5	Being able toadapt to new situations at building construction workplace	4.48	.75	SN
6	Being reliable while handling building construction works	4.49	.80	SN
7	Ability to manage building construction project time effectively for quick delivery	4.57	.76	EN
8	Ability to demonstrate positive work behavior at building construction workplace	4.54	.74	EN
9	Being resourceful while handling building construction work	4.53	.79	EN
10	Ability to learn from building construction related life experiences to make expert judgment	4.57	.74	EN
11	Ability to seek building construction work-related information	4.48	.82	SN
12	Ability to accept responsibility while handling building construction work without complain	4.57	.74	EN
13	Ability to develop personal building construction growth goals that are self-motivating	4.79	.56	EN
14	Ability to identify personal strengths and weaknesses while handling building construction works	4.44	.71	SN
15	Ability to accept and learn from building construction work's criticism	4.51	.75	EN
16	Ability to accept the consequences of one's actions while carrying out building construction works	4.59	.85	EN
17	Ability to identify opportunities not obvious to others at building construction workplace	4.55	.80	EN

Key: SD = Standard Deviation, EN = Extremely Needed, SN = Somewhat Needed.

Table 2
Mean Responses of the Respondents on the People-Related Skills Needed by Building Technology Students for Sustainable Employment in Building Construction Industry

(N=183)

S/N	Item Statement	Mean	SD	Decision
18	Ability to listen with clear understanding of other people's view in building construction workplace	4.75	.53	EN
19	Speak clearly with direction to others in building construction workplace	4.49	.64	SN
20	Ability to share building construction work-related information with others at work	4.57	.72	EN
21	Negotiate responsively with building construction clients	4.49	.80	SN
22	Empathize with building construction clients	4.55	.76	EN
23	Understand the needs of building construction clients	4.51	.77	EN
24	Ability to work with building construction people of different ages, gender, race, religion or political persuasion	4.46	.77	SN
25	Ability to work in building construction workplace as an individual	4.52	.79	EN
26	Ability to coach, mentor and give feedback to others in building construction workplace	4.57	.71	EN
27	Resolve clients' concerns in relation to complex building construction project	4.49	.84	SN
28	Show courtesy to other people at building construction workplace	4.54	.84	EN
29	Ability to build and maintain relationship with people at building construction workplace	4.57	.75	EN
30	Ability to manage conflict with others at building construction workplace	4.56	.76	EN
31	Allocate resources to tasks effectively at work for successful building construction works	4.51	.76	EN
32	Ability to work in building construction workplace as a member of a team	4.54	.75	EN

Key: SD = Standard Deviation, EN = Extremely Needed, SN = Somewhat Needed.

Table 3
Mean Responses of the Respondents on the Higher-Order Thinking Skills Needed by Building Technology Students for Sustainable Employment in Building Construction Industry

(N=183)

S/N	Item Statement	Mean	SD	Decision
33	Initiate innovative solutions to building construction work-related problems	4.68	.64	EN
34	Ability to organize building construction activities effectively for maximum construction productivity	4.35	.86	SN
35	Ability to manipulate building construction related information for construction of buildings with optimum performance	4.54	.75	EN
36	Interpret building construction information and drawing appropriate conclusions	4.51	.84	EN
37	Ability to think critically while handling building construction works	4.50	.79	EN
38	Ability to conceptualized thinking in a meaningful way while handling building construction works	4.53	.73	EN
39	Ability to make sound decisions regarding any building construction works	4.46	.84	SN
40	Ability to assess building construction work needs	4.43	.84	SN
41	Predict future trends and patterns of activities in building construction workplace	4.49	.84	SN
42	Accommodate multiple building construction client's demands for commitment of time, energy, and resources	4.54	.79	EN
43	Ability to analyze the interrelationships of building construction events and ideas from several perspectives	4.58	.72	EN
44	Evaluate major alternative points of view about building construction projects	4.57	.74	EN
45	Test assumptions about possible trends in construction works by taking the context of data and circumstances into account	4.55	.78	EN
46	Translate building construction ideas into workable construction activities	4.50	.73	EN
47	Being creative while handling building construction works	4.49	.81	SN

Key: SD = Standard Deviation, EN = Extremely Needed, SN = Somewhat Needed.

Table 4

Mean Responses of the Respondents on the Career-attribute Skills Needed by Building Technology Students for Sustainable Employment in Building Construction Industry

(N=183)

S/N	Item Statement	Mean	SD	Decision
48	Ability to plan the use of building construction resources effectively for maximum construction result	4.61	.74	EN
49	Participate in continuous improvement processes of building construction for optimum performance	4.57	.73	EN
50	Develop a building construction career vision and proactive plan to achieve it	4.68	.72	EN
51	Understand basic building construction systems and their relationships	4.81	.48	EN
52	Ability to be aware of emerging technologies in building construction	4.50	.82	EN
53	Ability to show integrity at building construction workplace that leads to professionalism	4.56	.75	EN
54	Understand the ethics of building construction workplace	4.50	.78	EN
55	Display accountability for actions taken while handling building construction works	4.51	.82	EN
56	Ability to develop and promote strong public image of the construction team	4.53	.83	EN
57	Ability to render selfless service while undertaking any building construction works	4.53	.74	EN
58	Satisfy building construction clients and co-workers in attainment of building construction workplace goals	4.57	.79	EN
59	Being motivated and motivating others to carry out building construction works in line building standards	4.54	.79	EN
60	Ability to administer people handling building construction works	4.60	.69	EN
61	Ability to manage building construction project resources efficiently	4.54	.75	EN
62	Ability to ensure building construction project are delivered in line with its construction priorities	4.59	.76	EN

Key: X = Mean, SD = Standard Deviation, EN = Extremely Needed, SN = Somewhat Needed.

Table 5

The t-test Analysis of the Mean Responses of Respondents on the Personal-attribute Skills Needed by Building Technology Students for Sustainable Employment in Building Construction Industry

(N1=31, N2=152)

S/N	Items Statements	X1	S.D1	X2	S.D2	t-cal	Sig.	Decision
1.	Ability to manage self while handling building construction works	4.97	.18	4.82	.57	1.47	.14	NS
2.	Ability to keep learning on integrating emerging technologies in building construction for optimum building performance	4.39	.50	4.38	.81	.04	.97	NS
3.	Exhibit high self-esteem while dealing with people involved in building construction works	4.71	.53	4.47	.81	1.59	.11	NS
4.	Ability to deal with building construction work pressure	4.68	.60	4.49	.87	1.17	.25	NS
5.	Adapt to new situations at building construction workplace	4.83	.37	4.41	.78	2.98	.00	S
6.	Being reliable while handling building construction works	4.77	.43	4.43	.85	2.16	.03	S
7	Ability to manage building construction project time effectively for quick delivery	4.77	.42	4.53	.81	1.66	.10	NS
8	Demonstrate positive work behavior at building construction workplace	4.71	.58	4.51	.76	1.39	.16	NS
9	Being resourceful while handling building construction work	4.87	.34	4.46	.84	2.68	.01	S
10	Ability to learn from building construction related life experiences to make expert judgment	4.74	.51	4.53	.77	1.44	.15	NS
11	Ability to seek building construction work-related information	4.71	.46	4.43	.87	1.75	.08	NS
12	Ability to accept responsibility while handling building construction work without complain	4.77	.50	4.53	.77	1.67	.10	NS
13	Ability to develop personal building construction growth goals that are self-motivating	5.00	.00	4.74	.60	2.36	.02	S
14	Ability to identify personal strengths and weaknesses while handling building construction works	4.84	.37	4.36	.74	3.54	.00	S
15	Ability to accept and learn from building construction work's criticism	4.68	.48	4.48	.79	1.34	.18	NS
16	Ability to accept the consequences of one's actions while carrying out building construction works	4.84	.37	4.54	.91	1.81	.07	NS
17	Identify opportunities not obvious to others at building construction workplace	4.81	.48	4.50	.84	1.97	.06	NS

Key: N1 = Total Number of Building Technology Teachers, N2 = Total Number of Employers in Building Construction Industry; X1= Mean of Building Technology Teachers, X2 = Mean of Employers in Building Construction Industry; SD1= Standard Deviation of Building Technology Teachers, SD2= Standard Deviation of Employers in Building Construction Industry; df = degree of freedom (181), Sig = Significance Level (2 tailed); t-cal. = calculated values of t-test on SPSS; S = significant, NS = Not Significant

Table 6

The t-test Analysis of the Mean Responses of Respondents on the People-related Skills Needed by Building Technology Students for Sustainable Employment in Building Construction Industry

(N1=31, N2=152)

S/N	Items Statements	X1	S.D1	X2	S.D2	t-cal	Sig.	Decision
18	Ability to listen with clear understanding of other people's view in building construction workplace	4.84	.45	4.73	.54	1.05	.30	NS
19	Speak clearly with direction to others in building construction workplace	4.65	.49	4.46	.66	1.48	.14	NS
20	Ability to share building construction work-related information with others at work	4.77	.56	4.53	.75	1.75	.08	NS
21	Negotiate responsively with building construction clients	4.74	.51	4.44	.84	1.93	.06	NS
22	Empathize with building construction clients	4.71	.59	4.51	.79	1.31	.19	NS
23	Understand the needs of building construction clients	4.77	.50	4.45	.80	2.13	.03	S
24	Ability to work with building construction people of different ages, gender, race, religion or political persuasion	4.68	.54	4.42	.80	1.70	.09	NS
25	Ability to work in building construction workplace as an individual	4.71	.53	4.48	.83	1.48	.14	NS
26	Ability to coach, mentor and give feedback to others in building construction workplace	4.77	.43	4.53	.75	1.77	.08	NS
27	Resolve clients' concerns in relation to complex building construction project	4.77	.50	4.43	.89	2.06	.04	S
28	Showing courtesy to other people at building construction workplace	4.77	.43	4.49	.90	1.70	.09	NS
29	Ability to build and maintain relationship with people at building construction workplace	4.87	.43	4.51	.79	2.49	.01	S
30	Ability to manage conflict with others at building construction workplace	4.71	.53	4.53	.80	1.23	.22	NS
31	Allocate resources to tasks effectively at work for successful building construction works	4.87	.34	4.44	.80	2.92	.00	S
32	Ability to work in building construction workplace as a member of a team	4.81	.40	4.48	.79	2.24	.03	S

Key: N1 = Total Number of Building Technology Teachers, N2 = Total Number of Employers in Building Construction Industry; X1= Mean of Building Technology Teachers, X2 = Mean of Employers in Building Construction Industry; SD1= Standard Deviation of Building Technology Teachers, SD2= Standard Deviation of Employers in Building Construction Industry; df = degree of freedom (181), Sig = Significance Level (2 tailed); t-cal. = calculated values of t-test on SPSS; S = significant, NS = Not Significant

Table 7
The t-test Analysis of the Mean Responses of Respondents on the Higher-order thinking Skills Needed by Building Technology Students for Sustainable Employment in Building Construction Industry

S/N	Items Statements	X1	S.D1	X2	S.D2	t-cal	Sig.	Decision
33	initiate innovative solutions to building construction work-related problems	4.84	.52	4.65	.66	1.48	.14	NS
34	ability to organize building construction activities effectively for maximum construction productivity	4.81	.48	4.26	.90	3.32	.00	S
35	ability to manipulate building construction related information for construction of buildings with optimum performance	4.74	.51	4.50	.78	1.65	.10	NS
36	interpret building construction information and drawing appropriate conclusions	4.68	.60	4.47	.88	1.23	.22	NS
37	ability to think critically while handling building construction works	4.74	.51	4.45	.83	1.86	.06	NS
38	ability to conceptualized thinking in a meaningful way while handling building construction works	4.77	.50	4.48	.76	2.06	.04	S
39	ability to make sound decisions regarding any building construction works	4.71	.53	4.41	.89	1.79	.08	NS
40	ability to assess building construction work needs	4.68	.54	4.38	.88	1.80	.07	NS
41	predict future trends and patterns of activities in building construction workplace	4.71	.53	4.44	.89	1.62	.11	NS
42	accommodate multiple building construction client's demands for commitment of time, energy, and resources	4.68	.54	4.51	.83	1.10	.27	NS
43	ability to analyze the interrelationships of building construction events and ideas from several perspectives	4.68	.54	4.57	.75	.79	.43	NS
44	evaluate major alternative points of view about building construction projects	4.87	.34	4.51	.78	2.55	.01	S
45	test assumptions about possible trends in construction works by taking the context of data and circumstances into account	4.81	.48	4.50	.82	2.01	.04	S
46	translate building construction ideas into workable construction activities	4.77	.43	4.45	.77	2.29	.02	S
47	being creative while handling building construction works	4.68	.54	4.45	.85	1.44	.15	NS

Key: N1 = Total Number of Building Technology Teachers, N2 = Total Number of Employers in Building Construction Industry; X1= Mean of Building Technology Teachers, X2 = Mean of Employers in Building Construction Industry; SD1= Standard Deviation of Building Technology Teachers, SD2= Standard Deviation of Employers in Building Construction Industry; df = degree of freedom (181), Sig = Significance Level (2 tailed); t-cal. = calculated values of t-test on SPSS; S = significant, NS = Not Significant

Table 8

The t-test Analysis of the Mean Responses of Respondents on the Career-attribute Skills Needed by Building Technology Students for Sustainable Employment in Building Construction Industry

(N1=31, N2=152)

S/N	Items Statements	X1	S.D1	X2	S.D2	t-cal	Sig.	Decision
48	Ability to plan the use of building construction resources effectively for maximum construction result	4.81	.40	4.55	.79	1.75	.08	NS
49	Participate in continuous improvement processes of building construction for optimum performance	4.84	.37	4.51	.77	2.29	.02	S
50	Develop a building construction career vision and proactive plan to achieve it	4.81	.40	4.66	.76	1.05	.29	NS
51	Understand basic building construction systems and their relationships	4.94	.25	4.79	.51	1.55	.12	NS
52	Ability to be aware of emerging technologies in building construction	4.81	.48	4.43	.87	2.36	.02	S
53	Ability to show integrity at building construction workplace that leads to professionalism	4.77	.62	4.52	.76	1.74	.08	NS
54	Understand the ethics of building construction workplace	4.77	.62	4.45	.80	2.16	.03	S
55	Display accountability for actions taken while handling building construction works	4.77	.56	4.45	.85	2.00	.06	NS
56	Ability to develop and promote strong public image of the construction team	4.77	.56	4.48	.87	1.81	.07	NS
57	Ability to render selfless service while undertaking any building construction works	4.65	.71	4.51	.75	.95	.34	NS
58	Satisfy building construction clients and co-workers in attainment of building construction workplace goals	4.81	.54	4.53	.82	1.82	.07	NS
59	Being motivated and motivating others to carry out building construction works in line building standards	4.87	.43	4.47	.83	2.64	.01	S
60	Ability to administer people handling building construction works	4.77	.56	4.56	.71	1.59	.11	NS
61	Ability to manage building construction project resources efficiently	4.81	.40	4.49	.79	2.20	.03	S
62	Ability to ensure building construction project are delivered in line with its construction priorities	4.87	.34	4.53	.81	2.27	.02	S

Key: N1 = Total Number of Building Technology Teachers, N2 = Total Number of Employers in Building Construction Industry; X1= Mean of Building Technology Teachers, X2 = Mean of Employers in Building Construction Industry; SD1= Standard Deviation of Building Technology Teachers, SD2= Standard Deviation of Employers in Building Construction Industry; df = degree of freedom (181), Sig = Significance Level (2 tailed); t-cal. = calculated values of t-test on SPSS; S = significant, NS = Not Significant

10. Conclusion

Based on the findings of the study, it was concluded that all the soft skills determined by the study are needed by building technology students for sustainable employment in building construction industry. These skills are needed in coordinating self, working with others, solving building related problems and understanding the building construction work environment. There is therefore a need for building technology students in the Polytechnic to be equipped with soft skills in other to secure sustainable employment in building construction industry. This will lead to the attainment of Polytechnic goals and objectives and ensure that the skills demand of the industry is a replica of the skills offered in the Polytechnic. This is imperative for a functional educational system in line with global best practices.

11.Recommendations

Based on the findings of the study, the following recommendations were made;

1.The identified soft skills should be integrated into the curriculum of building technology programme in Polytechnics for the training of students so as to enable them secure sustainable employment in building construction industry in line with Polytechnic goals and for economic as well as industrial development.

2.The curriculum for training building technology teachers should also be reviewed to include soft skills in order to prepare building technology teachers to be able to implement the curriculum with the new contents for the building technology programmes.

3.Curriculum developers and building construction industry should constantly meet with educational institutions through organized workshop in other to constantly identify skill-need areas as a result of changes in work demand which can be used for optimum review of the curriculum from time to time.

4.Soft skills determined should be packaged and used for re-training building technology graduates at skill acquisition centres for a minimum of six months before certification.

5.Seminars should be organized for building technology students so as to sensitize them on the importance of soft skills for workplace success and the need to develop them while in school.

Acknowledgement

Nill

Funding

No funding was received to carry out this study.

References

1. S.A. Adesanya, General philosophy and fundamental principles of curriculum development, (2013).
2. B.C.D. Agbo, Contract terminologies in the building construction industry, In Ezeji S. C. O. A. & B. C. E. C. Onoh (Eds), Construction Management. Enugu: Cheston Agency Press Ltd, (2008).
3. S.E. Andor, Students' Soft Skills as Correlates of their Academic Achievement in Basic Science, Unpublished M.ED research project, University of Nigeria, Nsukka, (2016).
4. A.O. Aworanti, Integration of "Soft Skills" Assessment into Public Examining in Technical and Vocational Education (TVE), Paper Presented During the 31st Annual Conference of Association of Educational Assessment in Africa Held at Botswana, (2012).
5. J. Balcar, Soft skills and their wage returns: Overview of empirical literature, Review of Economic Perspectives, 14(1) (2014) 3-15.
6. E.C. Caleb, A.E. Udofia, Generic Skills and the Employability of Electrical Installation Students in Technical Colleges of Akwa Ibom State, Nigeria. IOSR Journal of Research & Method in Education (IOSR-JRME), 1(2) (2013) 59-67.
7. A.P. Carnevale, 21st century Competencies for College and Career Readiness, Broken Arrow, OK: National Career Development Association, (2013).
8. D.U. Chukwu, , S.A. Ojo, E.C. Osinem, Aspects of Collaborative Learning Model for Developing 21st-Century Skills in Building Technology Students, Journal of Technical Vocational Education, Training and Research, 2 (2017).
9. M. Cleary, R. Flynn, S. Thomasson, Employability skills from framework to practice: An introductory guide for trainers and assessors, Canberra, Australia: Department of Education, Science and Training, (2006).
10. Doyle, Interpersonal Skills List, (2015).
11. E.O. Durowoju, O.U. Onuka, Best Practices and Experiences in Soft Skills Assessment in Oyo Town, Oyo State Schools, Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS), 5(5) (2014).
12. Federal Emergency Management Agency (FEMA), Earthquake-Resistant Design and Concepts: Chapter 4 buildings structures and non-structural components, (2015).
13. Federal Republic of Nigeria, National Policy on Education (revised), Lagos: Education Research and Development Council (NERDC) Press, (2013).
14. Hairuzila, M.D. Hazadiah, A. Normah, Integrating Soft Skills in the Teaching of Hard Sciences at a Private University: A Preliminary Study, Pertanika Journal of Social Science & Humanities, 22(17) (2014) 32-40.
15. International Labour Organization, Skills for improved productivity, employment growth and development, Paper presented at the International Labour Conference, (2008).
16. R.F. James, M.L. James, Teaching Career and Technical Skills in a "Mini" Business World, Business Education Forum, 59(2) (2004) 39-41.
17. H. Johani, T. B. Bhebhe, An Investigation into the Soft Skills that Employers in Zimbabawe expect Graduate Jobseekers to Possess: A Study of Five Companies under the Industrial Development Corporation of Zimbabwe (Limited) Group, Global Journal of Human Resource Management, 4(2) (2016) 1-20.
18. Kamenetz, Non-academic skills are key to success, But what should we call them?, (2015).
19. P. Klaus, Communication breakdown, California Job Journal, 28 (2010) 1-9.
20. S. Kumar, Building construction, Delhi: Standard Publishers Distributors, (2010).
21. Lagos State Gross Domestic Product (GDP) survey, Lagos State Bureau of Statistics, (2010).
22. D. Laker, J. Powell, The Differences between Hard and

Soft Skills and their Relative Impact on Training Transfer, Human Resource Development Quarterly, 22 (2011) 1-10.
23. L.H. Lippman, R. Ryberg, R. Carney, K.A. Moore, Key "Soft Skills" That Foster Youth Workforce Success: Toward a consensus across fields, Washington DC: Child Trends, (2015).
24. B.E. Mansour, J. C. Dean, Employability Skills as Perceived by Employers and University Faculty in the Fields of Human Resource Development (HRD) for Entry Level Graduate Jobs, Journal of Human Resource and Sustainability Studies, 4 (2016) 39–49.
25. M.R. Marcel, Executive Perceptions of the Top 10 Soft Skills Needed in Today's Workplace, Business Communication Quarterly, 75(4) (2012) 453–465.
26. G.W. Mitchell, L.B. Skinner, B.J. White, Essential soft skills for success in the Twenty-First Century Workforce as Perceived by Business Educators, Delta Pi Epsilon Journal, 52 (2010) 43-53.
27. National Board for Technical Education, Guidelines and Procedures for the Establishment of Private Technical and Technological Institutions in Nigeria, Kaduna: NBTE Press, (2014).
28. National Centre for Vocational Education Research (Australia), Fostering Generic Skills in VET Programs and Workplaces: At a Glance. ANTA, (2003).
29. B.G. Nworgu, Educational research: Basic issues and methodology, Nsukka: University Trust Publishers, (2015).
30. Occupational Outlook Handbook, (2012).
31. J.I. Oviawe, S.C.O.A. Ezeji, R.U. Uwameiye, Comparative Effects of Three Instructional Methods on Students' Performance in Building Technology in Nigerian Polytechnics, European Scientific Journal, 11(12) (2015).
32. A.C. Paolini, School Counselor's Role in Facilitating the Development of Students' Soft Skills: Intrapersonal and Interpersonal Attributes to promote Career Readiness, Global Journal of Human-Social Science, Linguistics & Education, 15(10) (2015).
33. K.P. Prasanta, Soft Skills: Education beyond Academics, IOSR Journal of Humanities and Social Science (IOSR-JHSS), 19(5) (2014) 01-03.
34. T.G. Rinker, Why developing soft skills during high school matters? (2014).
35. M. Rouse, Soft skills, (2015).
36. N.R. Sharifah, H. Hanipah, F. Shahbodin, 21st Century Core Soft Skills Research Focus for Integrated Online Project Based Collaborative Learning Model, Journal of Applied Science & Agriculture, 9(11) (2014) 63-68.
37. O.O. Sodipo, Employability of tertiary education graduates in Nigeria: Closing the Skills-Gap. Global Journal of Human Resource Management, 2(3) (2014) 28-36.
38. E. Sparks, M.J. Waits, Degrees for What Jobs? NGA Center for Best Practices, (2011).
39. C. Spiers, Cool it: Anger management and conflict resolution, (2012).
40. D. Spisak, Soft Skills: The Foundation for Academic and Career Success, Career Education (2015).
41. United States Department of Labor, Soft skills to pay the