



UNIVERSITI PUTRA MALAYSIA

***MODERATING EFFECT OF WORK EXPERIENCE ON RELATIONSHIPS
BETWEEN PREDICTORS AND EMPLOYABILITY AMONG ENGINEERING
STUDENTS IN NIGERIAN POLYTECHNICS***

OGUCHE INNOCENT OJONUGWA

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By

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**Thesis Submitted to the School of Graduate Studies,
Universiti Putra Malaysia, in Fulfilment of the
Requirement for Doctor of Philosophy**

October 2015

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DEDICATION

To my lovely wife Mary, for her love, patience and wholehearted support. My lovely children Praise, Rehoboth, Peace, Salem, Osmond and Godsdelight. My beloved parents.



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in Fulfilment of the requirement for award of the Degree of Doctor of Philosophy

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October 2015

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Polytechnic is one of the Technical and Vocational Education (TVET) institutions in Nigeria accounting for over 472,000 graduates annually with an annual 20% increase. As the number of Nigerian Polytechnic graduates rise significantly, unemployment rate also increases. The need for polytechnic engineering students to acquire employability skills that will make them marketable and be gainfully employed and fit into the 21st century workforce cannot be over emphasized. In the face of increasing unemployment partly due to decreasing employability skills among Nigeria polytechnic engineering students, many graduates of Nigeria polytechnic have a dwindled confidence of gaining needed employment after graduation. Employability is seen as a construct interrelating to social factors and the individual skills. The study determined the level of employability, basic job performance skills, self-efficacy and subject understanding among engineering students in Nigerian Polytechnics. It further explores the relationship within predictors of employability among engineering students in Nigerian Polytechnics thereby, investigates the dimensionality of the relationships between contributors of employability among engineering students in Nigerian Polytechnics and finally sorts to find out the strength of predictors by investigating the moderating effect of work experience on the relationship between the predictors of employability among engineering students in the Nigerian Polytechnics.

Data were obtained from 465 polytechnic engineering students in Nigeria using a simple random sampling to select 5 polytechnics from the north central geopolitical zone and cluster sampling approach to select the 465 students used for the study. The data were analyzed statistically using descriptive and inferential analysis (factor analysis and structural equation modelling). The results of the study revealed that Basic job performance skills, Self-efficacy and Subject understanding had significant effect on employability. Subject understanding having the highest significant effect on employability thus, the most significant predictor of employability followed by basic job performance skills. The last predictor of employability from the study is self-efficacy. The study reveal that five dimensions of basic job performance skills emerged. The most important dimension in basic job performance skills is foundation skills subscale and competency (system technology) followed by competency skill-management, basic skill, and thinking skill. Five dimensions of self-efficacy also

emerged in the study. The most important dimension of self-efficacy is goal selection and planning followed by problem solving, self-appraisal, and occupational information. Furthermore, six dimensions of subject understanding emerged in this study, the most important dimension in subject understanding is application and practice, followed by system approach, engineering discipline, science and practice, professionalism, and problem solving.

Finally, three dimensions of employability emerged in this study. The most important dimension for employability is marketability, followed by job retention, and lastly job seeking duration. The research findings further revealed the moderating effect of work experience on the relationship between the IVs and the DV. The results shows that low and high work experience had a positive significant effect on employability except for self-efficacy which had a positive but no significant effect on employability. The implication is that work experience strengthens basic job performance skills, and self-confidence of polytechnic students in Nigerian polytechnic giving them a better chance of being employed in the labor market.

Based on the findings, it was suggested that authorities in charge of Nigerian education sector should put in place appropriate policy thrust to enhance delivery of quality education that will facilitate acquisition of skills necessary for employment of polytechnic engineering graduates. Curriculum development in line with the global best practice, including training of academic staffs that could ensure the acquisition of basic job performance skills, subject understanding and self-efficacy of polytechnic engineering students should be put in place.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

**KESAN MODERASI PENGALAMAN KERJA TERHADAP HUBUNGAN DI
ANTARA PERAMAL DAN KEMAHIRAN KEBOLEHKERJAAN DALAM KALANGAN
PELAJAR POLITEKNIK KEJURUTERAAN DI NIGERIA**

Oleh

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Politeknik adalah salah satu institusi Pendidikan Teknik dan Vokasional (TVET) di Nigeria. Setiap tahun lebih daripada 472,000 pelajar yang menamatkan pengajian dari institusi berkenaan dengan pertambahan 20% setiap tahun. Kadar pengangguran graduan meningkat, apabila bilangan graduan Politeknik ini meningkat dengan ketara. Oleh itu, kajian ini memfokus kepada terdapat keperluan pelajar kejuruteraan politeknik untuk memperoleh kemahiran kebolehkeraan untuk membolehkan mereka memenuhi tenaga kerja abad ke-21. Dalam menghadapi peningkatan pengangguran disebabkan oleh kurang kemahiran kebolehkeraan dalam kalangan Nigeria pelajar kejuruteraan politeknik, ramai graduan Nigeria politeknik berasa kurang yakin untuk mendapatkan pekerjaan selepas tamat pengajian. Kebolehkeraan adalah itu konstruk yang saling berkaitan dengan faktor sosial dan kemahiran individu. Kajian ini cuba menentukan kebolehkeraan, kemahiran asas performans kerja, efikasi sendiri dan kefahaman subjek dalam kalangan pelajar kejuruteraan politeknik di Nigeria. Kajian ini seterusnya meneroka hubungan di antara peramal kebolehkeraan dalam kalangan pelajar, dengan menentukan kedimensian hubungan antara penyumbang kebolehkeraan dalam kalangan pelajar kejuruteraan di Politeknik Nigeria dan akhirnya menentukan kekuatan peramal dengan menentukan kesan moderasi pengalaman kerja terhadap hubungan di antara peramal kebolehkeraan dalam kalangan pelajar kejuruteraan di Politeknik Nigeria.

Kajian ini melibatkan 465 pelajar kejuruteraan politeknik di Nigeria dengan menggunakan persampelan rawak mudah untuk memilih lima buah politeknik dari zon geopolitik utara tengah, pendekatan kluster persampelan digunakan untuk memilih pelajar. Data dianalisis menggunakan statistik deskriptif dan inferensi (analisis faktor dan pemodelan persamaan struktur). Keputusan kajian menunjukkan bahawa kemahiran asas performans kerja, efikasi sendiri dan kefahaman subjek mempunyai kesan yang signifikan ke atas kebolehkeraan. Kefahaman subjek yang mempunyai kesan signifikan yang paling tinggi ke atas kebolehkeraan dan merupakan peramal yang paling penting kebolehkeraan diikuti oleh kemahiran asas performans kerja. Peramal terakhir kebolehkeraan adalah efikasi sendiri. Kajian ini mendedahkan bahawa lima dimensi kemahiran asas performans kerja. Dimensi yang paling penting dalam kemahiran asas performans kerja adalah subskala kemahiran asas dan kecekapan

(teknologi sistem) diikuti dengan kompetensi kemahiran pengurusan, kemahiran asas, dan kemahiran berfikir. Lima dimensi efikasi sendiri juga muncul dalam kajian ini. Dimensi yang paling penting dalam efikasi sendiri adalah pilihan matlamat dan perancangan diikuti dengan penyelesaian masalah, penilaian diri, dan maklumat pekerjaan. Selain itu, enam dimensi kefahaman subjek pemahaman muncul dalam kajian ini, dimensi yang paling penting dalam kefahaman subjek adalah aplikasi dan praktis, diikuti dengan pendekatan sistem, disiplin kejuruteraan, sains dan praktis, profesionalisme, dan penyelesaian masalah. Akhir sekali, tiga dimensi keboleherjaan muncul dalam kajian ini. Dimensi yang paling penting keboleherjaan adalah kebolehpasaran, diikuti dengan retensi kerja, dan tempoh mendapat pekerjaan.

Dapatan kajian menunjukkan kesan moderasi pengalaman kerja terhadap hubungan di antara pembolehubah bebas (IV) dan pembolehubah sandar (DV). Keputusan menunjukkan pengalaman kerja rendah dan tinggi mempunyai kesan signifikan dan positif terhadap keboleherjaan kecuali efikasi sendiri yang mempunyai kesan positif tetapi tidak signifikan terhadap keboleherjaan. Implikasi kajian ialah pengalaman kerja menguatkan kemahiran asas performans kerja dan keyakinan pelajar politeknik di Nigeria di mana memberi peluang yang lebih luas untuk mendapatkan perkerjaan.

Berdasarkan kajian ini, dicadangkan bahawa pihak berkuasa yang bertanggungjawab bagi sektor pendidikan Nigeria perlu mewujudkan dasar yang bersesuaian teras bagi meningkatkan penyampaian pendidikan berkualiti yang akan memudahkan pemerolehan kemahiran yang diperlukan bagi pekerjaan graduan kejuruteraan politeknik. Pembangunan kurikulum selaras dengan amalan terbaik global, termasuk latihan kakitangan akademik yang dapat menjamin pemerolehan kemahiran asas performans kerja, kefahaman subjek dan efikasi sendiri pelajar kejuruteraan politeknik.

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This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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LIST OF ABBREVIATIONS

AMOS	- Analysis of Moment Structure
CFA	- Confirmatory Factor Analysis
EFA	- Exploratory Factor Analysis
FRN	- Federal Republic of Nigeria
HND	- Higher National Diploma
ILO	- International Labour Organisation
MEES	- Malaysian Engineering Employability Skills
NBTE	- National Board for Technical Education
ND	- National Diploma
NDE	- National Directorate of Employment
NYSC	- National Youth Service Corps
SEM	- Structural Equation Modelling
CAN	- Secretaries Commission on Achieving Necessary Skills
TVET	- Technical and Vocational Education in Nigeria

CHAPTER 1

INTRODUCTION

1.1 Background of the study

Unemployment is a negative phenomenon occurring with great intensity around the globe. International Labour Organization (ILO), (2015) reported that unemployment is growing in an uncomfortable proportions. Unemployment is a situation where citizens of a country who are qualified for work and are supposed to be engage in a paid job are not utilized. The Nigerian National Bureau of Statistics describes unemployment as the workforce that are available in labour market who are unable to secure work for at least 39 hours in a week (Central Bank of Nigeria, 2008). Abiodun, (2010) sees unemployment as the fraction of the workforce that are not gainfully employed even when they desire to do so, at a particular time. In the of case Nigeria, unemployment of graduate can be said to be a situation where graduates of tertiary institutions are not able to secure a job even when they are willing to do so after their National Youth Service Corps programme (Akande, 2014). This implies that unemployment is the percentage of the labour force of a country that is looking for a job (Oner, 2012).

Unemployment issues is a global phenomenon, thus, every country around the world experience unemployment situation with each making effort to addressing the situation. The backlog of global unemployment was estimated to stand at 201.5 million in 2013 (ILO, 2015). Of this figure, youth unemployment stood at 73.4 million as at 2013 as shown in Table 1.1 The Table also reported that youth unemployment percentage as at 2013 ranked the highest globally (12.6%), thus, a negative trend, an indication that unemployment issue among youths is a global phenomenon.

Table 1.1: Global Unemployment and Unemployment Rates in 2007 to 2013

	2007	2008	2009	2010	2011	2012p	2013p
Youth Unemployment (millions)	69.9	70.4	75.6	74.0	72.6	72.9	73.4
Adult Unemployment (millions)	99.8	104.4	120.7	120.0	119.7	122.5	128.1
Total Unemployment (millions)	169.7	174.8	196.4	194.0	192.3	195.4	201.5
Youth Unemployment rate (%)	11.5	11.7	12.7	12.5	12.3	12.4	12.6
Adult Unemployment rate (%)	4.0	4.1	4.6	4.5	4.5	4.5	4.6
Total Unemployment rate (%)	5.4	5.5	6.1	6.0	5.9	5.9	6.0
Ratio of Youth-to-Adult Unemployment Rates	2.9	2.9	2.7	2.8	2.8	2.8	2.7

Source: International Labour Organization (2015).

Note: Youth (15–24), Adult (25+) and Total (15+),

In the Africa context, the continent of Africa is the second most populous continent on the globe, having the highest concentration of youths (Katebalirwe, 2014). It was reported that up to 70% of Africa's population are under the age of 30 (Katebalirwe, 2014; Voices of Youth, 2014) and majority of this youth population are either unemployed or underemployed. A well planned economy with this size of youth population has the opportunity for growth but can also become a source of instability if youth unemployment are not addressed. The situation in Nigeria is also disturbing, the National Population Commission and ICF Macro, (2009) reveals that almost half of Nigeria population is made up of youth. Awogbenle & Iwuamadi, (2010) affirmed that youth population in Nigeria is currently put at 80 million, representing 60% of the entire population of the country. It was further stressed that 1.6 million of this 80 million are underemployed while 64 million are unemployed. This is a disturbing trends that required urgent solution among the stakeholders in Nigeria. Youth in Nigeria are classified as people within the age bracket of 15 and 34 years (Akande, 2014).

Many countries around the world are making effort to reduce their unemployment rate and Nigeria is not an exception. One of the steps involved in reducing unemployment in Nigeria is the instrument of higher technical based institutions. Bakar, et al., (2013a) observed that there has been worldwide movement in technical educational and labour policies that necessitates technical institutes of higher learning to carry over the responsibility for the employability of their graduates. Research has shown the positive relationship between technical higher education and the labour market (Michael and Tomlinson, 2012), hence, technical higher education is empowered to improve human capital, skill acquisitions and social reproduction of graduates. This assumption would have been more appreciated if Nigerian youths trained in various polytechnics across Nigeria are exempted from this trend of unemployment due to the technical orientation associated with polytechnic education (Ajufo, 2013; Akinyemi et al., 2012).

However, while there is no accurate data on the number of polytechnic graduates who are unemployed in Nigeria, it was estimated that about 159,476 students enrolled for Polytechnic education in 2002 / 2003 academic session and the number increased to 272,038 in 2004/2005, thus, indicating an approximate increase of 59% (Emeka, 2011). Paradoxically, with the increase in polytechnic enrolment rate and subsequent graduate output, unemployment has been on the rising tide and pose a great challenge to Nigeria as a nation (Alabi, 2014; Innocent, 2014; Akinyemi, Ofem, & Ikuenomore, 2012). It was reported that Nigerian Polytechnics produce thousands of Engineering graduates annually with majority of them without a job, (Odinaka, 2013). Another dimension among Engineering graduates from Nigerian polytechnics is the very limited employability skills (Akanmu, 2011) despite the one year industrial work experience programme designed to equip their employability potential. It is in view of the above, this research work seeks to investigate the moderating effect of work experience on the relationship between predictors and employability among engineering students in Nigerian polytechnics.

1.2 Brief Profile of Nigeria and Her Educational System

Nigeria is a former British colony, located in West Africa. This country is Africa most populous nation and leading oil producer. It is bordered by Benin, Cameroon, Chad, and Niger. The World Factbook, (2015) reported that Nigerian population had risen to

174,507,539. The country has 36 states and a federal capital territory. Geopolitically, the country is zoned into six geopolitical zones known as South-South, North-Central, North-East, South-East, North-West and South-West. The oil nation has slowed down in development due to corruption, inadequate infrastructure, poor economic management, unemployment and poverty (Poverty & Chollet, 2007). The nations industry include crude oil, coal, tin, columbite rubber products , hides and skins, wood, cement, textiles, food products, foot wears, fertilizer, chemicals, printing, steel, ceramics etc. (Okafor, 2007). The three major tribes are Hausa in the north, Yoruba in the southwest and Ibo in the southeast. English is the only approved language both for offices and schools, for reading, writing and speaking.

Education in Nigeria is shared between the three tiers of government, the federal, state and local governments. However the federal ministry of education plays the leadership role by formulation of policies, ensuring implementation, providing good supervision and quality control. In the views of Amaghionyeodiwe & Osinubi, (2006) education in Nigeria is a public enterprise with government playing active participation, it is a vehicle for achieving national development. The local and state government are more directly involved in primary and secondary schools respectively, while the state and federal government are responsible for tertiary institutions. Education in Nigeria is subdivided into 3 sections, basic (9 years), post basic (3years) and tertiary (4-7 years). The tertiary education consists of the university, polytechnic and colleges of education. These sectors provide educational opportunities for undergraduates, graduates, and technical and vocational education as shown in Figure 1.1.

Currently the Nigerian government has put in place reforms and initiatives aimed at reengineering and improving the educational system. To this effect some polytechnics and colleges of education have been upgraded to the status of degree awarding (World Education News & Review, 2011). Work experience is considered as an integral part of the curriculum in polytechnic education in Nigeria, it is viewed as an important link between education and productivity. Central Board of Secondary Education Delhi (2004) pointed out that work experience is an important instrument for the preparation of a students as a self-supporting and productive citizen and as a potent means of social reconstruction and national development. This experience is expected to help the student bridge the gap between theory and practice. In this study the moderating effect of work experience of engineering students in Nigerian polytechnics will be examined to determine whether or not the relationship between predictors and employability is dependent on work experience.



Figure 1.1 Education System and Qualification Structure in Nigeria

1.3 Statement of the Problem

Polytechnic education is a technology and science base education which is centred on skill acquisition linking theory and practice (Nairaland Forum, 2005). The nature of training received in the polytechnic by students are expected to equip them with readily employable skills that will enable them fit properly into the available work in the labour market (Lagos State Polytechnic, 2013). Polytechnic education is structured to offer complete practical training in many professional fields. The aim is to make an engineer out of the mechanical student who should be able to distinguish himself with his hands-on application of problem-solving skills. In spite of this skill oriented training, it was estimated that over 150,000 Polytechnic graduates are been turned-out annually into the Nigerian labour market (BusinessDay, 2013; Ibidunni, Falola, Ayodotun, & Olokundun, 2014; Oghenenyoreme & Ikechukwu, 2014) without the corresponding hope of been employed. This implies that that it is not the actual job that may be lacking but the needed skills might not have been acquired.

Nigeria has one of the highest unemployment figures in the world and that graduates of Nigerian Polytechnics had the hardest hit by the menace of unemployment (Afolabi, Yusuf, & Alao, 2014). In a recent study on unemployment among Nigerian youths, it was reported that only one in every 10 Polytechnic engineering graduates get a job in Nigeria (Bassey & Atan, 2012). They further pointed out that a recent report by the National Directorate of Employment (NDE) revealed that in Nigeria over 200,000 Nigerian Polytechnic engineering graduates who completed the National Youth Service Corps (NYSC) in the last five years, remained unemployed. This is despite the one year work experience that is integrated into the polytechnic engineering training programme in Nigeria. The one year industrial training programme is designed to equip the Nigerian engineering students with the required skill, and work experience to enable than fit into the labour market. In view of the above the present study aimed to examine the moderating effect of work experience on the relationship between predictors and employability among engineering students in Nigerian polytechnics.

Various studies had been conducted to examine graduate employability in Nigeria with focus on the university graduate (Leigha, 2014; Bassey & Atan, 2012; Adeyeye, Aina, & Kolapo, 2012). However, studies that focuses on employability of polytechnic engineering students are limited (Philip Consulting, 2014), hence, one of the gaps that call for the present study. Globally, various employability models had been developed to explain skills and personal qualities required by students to get employed, however, models developed to explain employability among Nigerian youths with focuses on the polytechnic engineering students are limited. Thus, another gap to be filled in the present study.

On successful completion of the National Diploma students are expected to proceed on a one year compulsory industrial work experience which is a prerequisite for admission into the Higher National diploma. Empirical work examine the moderating effect of work experience on skills acquired from the polytechnic are limited, this is another gap that need to investigate. In view of the above gaps, the need therefore arises to investigate Moderating effect of work experience on the relationship between predictors and employability among engineering students in Nigerian polytechnic.

1.4 Objective of the Study

The main purpose of this present study is to examine predictors of employability among engineering students in Nigerian polytechnics.

Specific objectives include

- (1) To determine the level of employability among engineering students in Nigerian Polytechnics.
- (2) To determine the level of basic job performance skills, self-efficacy and subject understanding among engineering students in Nigerian Polytechnics.
- (3) To determine the relationship between basic job performance skills, self-efficacy and subject understanding on employability among engineering students in Nigerian polytechnics.
- (4) To examine the relative contribution of basic job performance skills, self-efficacy and subject understanding on employability among engineering students in Nigerian polytechnics.
- (5) To examine the moderating effect of work experience on the relationship between self-efficacy, basic job performance skills, and subject understanding on employability among engineering students in Nigerian Polytechnics

1.5 Hypotheses

The following null hypotheses will be tested to answer the objectives of this study:

- Ho₁: There is no relationship between basic job performance skills and employability
- Ho₂: There is no relationship between self-efficacy and employability.
- Ho₃: There is no direct relationship between subject understanding and employability.
- Ho₄: Work experience does not significantly moderate the relationship between basic job performance skills and employability
- Ho₅: Work experience does not significantly moderate the relationship between Self-efficacy and Employability.
- Ho₆: Work experience does not significantly moderate the relationship between Subject understanding and Employability.

1.6 Significance of the Study

1.6.1 Strategic Decision Makers in Nigerian Education Sector

Government has made a serious investment in teaching and learning in Nigerian polytechnics. It is important to note that Polytechnics education in Nigeria is for the training of middle level technical manpower needed for the countrys development. This education system should be able inculcate employability skills in the learning process in order to enhance the employability quality of polytechnic graduates. One of

the characteristics of polytechnic education is the importance placed on practice-based learning. Industrial work experience is included as a strong part of the practical curriculum. This helps the students gain some level of experience. The training is most relevant to the student and then the country. Shockingly, the president of the Association of Professional Bodies of Nigeria revealed that over 5,000 Chinese artisans are working in Nigeria (Wale, 2013). This implies that jobs for these category of graduate may not be scarce as supposed. Moreover, they polytechnic graduates are expected to have acquired skills for self employment. This study is expected to identify the dimensions of employability in the context of engineering students in the Nigerian Polytechnics.

The outcome of the present study will enable authorities in charge of Nigerian education sector to know the appropriate policy thrust to put in place to enhance delivery of quality education. Furthermore, the outcome of this study will enable the managers of Nigerian education institutions know the employability skill required to enhance the employment opportunities for training Nigerian Polytechnic graduates. Moreover, the study will educate curriculum planners in Nigeria on best approach to adopt when planning and improving the curriculum for polytechnic students. It will enable the curriculum planners to ensure that the curriculum focuses and specifies the required skills for employment in the world of work.

1.6.2 Strategic Decisions / Policy Makers in Government

As a result of variation in employment policy and level of development of countries, it was reported that dimensions that determine employability among youths of countries differs (Philip Consulting, 2014). It is expected that the outcome of this study will unfold significant predictors of employability among engineering students in Nigerian polytechnics. The outcome of the present study will enable the government of Nigeria identify some of the challenges facing polytechnic graduates in Nigeria labour market, hence, suggests appropriate remedies to checkmate its continuity. Moreover, the study will also bring to the limelight, the expectations of Nigerian Polytechnic student from the government of Nigeria hence, assists the government to plan and formulate feasible and viable policies towards the delivery of memorable education experience capable of building their self-confidence to seek for jobs of their choice.

1.6.3 Human Resources Recruitment Practitioners

The outcome of this study will enable human resources practitioners in Nigeria understand the basic job performance skills and other human resources qualities required of Polytechnic students or graduates. Thus, assists to formulate appropriate recruitment strategies and plans towards recruiting Polytechnic graduates in Nigeria.

1.6.4 Parents and Guardians around the World

Information contained in the present study will enable parents and guardians in Nigeria have a better understanding of the features that characterized the Nigerian polytechnic sector visa-a-vice skills and employment. This will enable them advice their wards accordingly.

1.6.5 Theoretical Relevance

The theory of employability have been difficult to identify, according to Bridgstock, (2009) there are several approaches to measuring employability, however the human capital development theory adopted for this study emphasis that higher institution of learning increases the productivity of students hence higher earning (Lees, 2002;Rovio-Johansson & Tengblad, 2007). The outcome of this study will contribute theoretically to the body of knowledge, since, the human capital development theory and models developed to explain employability among Nigerian youths with focuses on the polytechnic engineering students. The present study will help in bridging this gap by developing and confirming a contemporary employability model capable of explaining employability of polytechnic engineering students in Nigeria. Furthermore, in view of one sided approach to the study of employability in Nigeria focusing only on university students, this study would have addressed this gap, hence focusing on the polytechnic engineering students. The present study will also confirm those employability predictors influencing polytechnic engineering students in Nigeria. Researchers, students and academic staff of Nigerian polytechnics will find the outcome of this study useful as a veritable source of reference materials.

1.7 Limitation

This study bases findings on the self-perception of respondents, which has a probability of either producing accurate data or otherwise. There is a recognizable trend that people are more open to positive reflections on their personal knowledge, behaviour and attitude when self-reporting. Caution should therefore be taken before making generalization and conclusion from findings to engineering programs beyond the scope of this. Again the possibility of bias on the part of the researcher may pose a limitation. The researcher began this study with years of working experience as an educator in the north central Nigeria, personal knowledge of the county and the vocational education programs hence, the possibility of bias on his part. Time and resources limited the study to six of the nine polytechnics in the north central zone of Nigeria

1.8 Delimitation

Data for this study was collected from the polytechnics students from both federal and state polytechnics and might not be generalized to other technical colleges and universities in the region, since the structure of the studies are different among these institutions. The study was restricted to the north central geopolitical region of Nigeria. The specific delimitations foisted on the study show the range of issues covered or excluded by the study. The focus of the study can therefore be seen to arguably hinge on hypothetical, rather than on practical argument; the portrayed idea of various areas of employability process in comparison to practical or empirical examination of same processes were limited. Efforts was made to simplify certain aspects of the processes under study using purely theoretical focus. However, while certain aspects that otherwise might have contributed to the over-all portrayal of a biased reality were more or less ignored, other important aspects were examined, described and analysed with further rigidity.

1.9 Definition of Terms

1.9.1 Employability

A psycho-social construct relative chances that is acquired and embodied in the individual qualities that enhance adaptive cognition, behaviour, affect, and foster different kinds of employment, the individual-work interface (Fugate, Kinicki, & Ashforth, 2004). The disposition to showcase skills, understandings and personal attributes, expected to be or predicted as impotent and necessary for future achievements. It is the emotional, self-effectiveness, self-management and decision making process preparing the individuals to gain and adjust to the demand of modern work place and be successful in it which benefits not only himself but the society (Guthrie, Akers, & Lozano, 2009). In this study employability is measured in terms of job seeking duration, nature of job sort for and job retention. This is operationalized by the computation of items found within the study's questionnaire. It is believed that students will be free from complexity or great effort when looking for job.

1.9.2 Basic Job Performance Skills

Functional Modern work place Positive Approach, coupled with group skills, enabling knowledge, attitudes, and abilities, accepting new ideas which can facilitate young people in negotiating initial employment, sustaining it, and making career changes whenever necessary. Skills and attitude required in the 21st century work place. In this study employable skills is measured in terms of basic job performance. This is operationalized by the computation of items found within the study's questionnaire. It consists of items adopted from SCAN as perceived by students. These items comprise basic skills, thinking skills, foundation skill, competency, resource management, and competency: interpersonal skills, competency: information management competency: system and competency: technology.

1.9.3 Subject Understanding

Engineering-related higher national diploma programs: Academic programs of study aimed at preparing graduates for jobs in related industries in state and federal ministries in Nigeria. Such programs of study include mechanical engineering, electrical/electronic engineering, civil engineering and computer engineering. In this study subject understanding refers to problem solving skills, competence in application and practice, knowledge of science and engineering principles, engineering system approach and proficiency in specific engineering field. It is operationalized by the computation of items found within the study's questionnaire. It consists of items adapted and adopted from Malaysian Engineering Employability Skills (MEES).

1.9.4 Self-efficacy

This describes an individual belief, perception or expectations that he or she can successfully execute behaviour or tasks that he believes he can succeed in. It also refers to the individual persistence despite all odds, estimate to which one can cope in

performance and thrive in it (Schreuder & Coetzee, 2011). In this study self-efficacy refers to self-appraisal, occupational information, goal selection, planning and problem solving. It consists of items adapted and adopted from career decision self-efficacy scale.

1.9.5 Work Experience

Work programme that can provide understanding and skills needed in the work environment within a space of time. It can also be referred to as cumulative activity a person gains from his job in his occupation or profession. In this study work experience refers to experience acquired by students after their national diploma programme.



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