

# Assessing Technical Vocational Education and Training (TVET) Labour Market Potentials: Comparison of Conferees' Opinions

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**Abstract:** Technical Vocational and Technical Education (TVET) has the potential to influence the labour market and transform the economy resulting in an improvement in the advancement of careers. This study assesses the potential of TVET to influence the labour market using the opinions of conferees. The study employs an integrative multi-method approach with a descriptive survey and focus group discussion. A structured questionnaire was used to collect data from 153 conferees using self-selection, non-probability sampling technique. Descriptive statistics of percentages and mean were used to analyze the data collected. Furthermore, the Keiser-Meyer-Olkin (KMO) measure of sampling adequacy gave MSA of .948; Bartlett's Test of Sphericity showed  $p$ -value of 0.000, necessitating a factor analysis. The Kruskal-Wallis H Test was used to determine the statistical differences in the responses. Results revealed a gradual balance of gender in TVET with 53% female and 47% male; among the 99% employed in diverse sectors, only 18% (28) created jobs by themselves. Although there was coherence in agreement to TVET potentials, some respondents disagreed that TVET leads to good career opportunities. Findings show underlying strategy groupings to improve potential, in line with the focus group analysis, include: quality and upgraded learning environment, teachers and labour market information; relevant technical and employability skills, and established gender equality standards.

**Keywords:** Labour market, TVET, TVET potentials, employability skills, technical skills, dual TVET, employment, gender equality

## 1. Introduction

A national economy continually seeks means of advancement to remain competitive globally. As the economy continues to advance in developed and developing nations, the demands of one major component being the labour market also continue to evolve (Bakar, 2011). The labour market is the meeting place for supply and demand of knowledge, skills, and attitude with a determined price and quantity of performance (Dawkins & Stromback, 1996). According to Boeri, Van and Ours (2013), it is the market where the number of services corresponding to tasks established in the job description is rendered for remuneration. In the labour market, individuals/employees represent sellers and suppliers of knowledge, skills and experiences. In contrast, companies/industries act as buyers, demanders and bidders of payment and working conditions (Serena, 2017). Amidst the functions of the labour market (Dorofeev 2014) is the provision of information necessary to guide the experience offered and training provided in education, vocational training and retraining of educational experts, as a way of ensuring that supply meets demands.

Technical Vocational Education and Training (TVET) has been adopted and positioned as a panacea to meeting current and future labour market demands. According to Park (2005), TVET is the systematic and orderly transmission of knowledge, skills and values to develop a workforce that can enhance productivity and sustain competitiveness in

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the global economy. As a sustainable development toolkit (Bakar, 2011), TVET were positioned to tackle poverty alleviation, weak economic growth and low productivity, social inequality, instability and insecurity, the menace of environmental decadence and poor knowledge of green practices (United Nations Educational, Scientific and Cultural Organization, UNESCO (2019). Realising the capacities of TVET demands an understanding of the changing world of work (Wilson, 2005) which invariably requires that the teachers, teaching techniques and equipment must be changed to attune with global expectations (Siriwardene & Qureshi, 2009). As work and occupationally directed system of education, TVET posits to enhance individuals' capability, employability, adaptability, career mobility and productivity generally (Bakar, 2011). According to Bakar (2011), through TVET, countries have produced highly skilled workers, hence high human capital development, thereby advancing industrialisation and economic growth. The truth behind this assertion is verifiable in many countries as TVET is implemented in variant modes.

For instance, literature infers that China became the manufacturing hub of the world through her organised TVET system. China has equally been acknowledged as the second world largest economy (World Bank, 2017). Although the White House Office Trade and Manufacturing Policy (2018) described the developmental path taken by China as 'economic aggression', there were still commendable acknowledgements of enterprise proliferations in China where over 300 entrepreneurial parks housing about 24,000 enterprises exist. Likewise, Xinyu (2019) reported that the unemployment rate in China urban areas was at 3.8% in 2018, yet 980 Million Yuan were spent on giving vocational training to the jobless. TVET undoubtedly plays commendable roles in the labour market of China.

Similarly, of significant impact to the labour market potentials of TVET is the German-style method of vocational education called Dual TVET (Remington 2018), where there is two-fold education in which schools and firms share responsibility for providing TVET through apprenticeship training (Remington, 2017). The major strides of German dual system are in the supply of highly skilled labour in accordance with the demand of the highly technologically driven economy, making certain the quickest transition from school to work thereby ensuring that the youth unemployment remains low (Remington, 2018; 2017). According to Trade Economics (2019), the unemployment rate of Germany stood at 3.1% in August 2019. Similarly, in August 2019, Malaysian's unemployment rate was reported to be 3.4%. In the case of Malaysia, the current employment upsurge in Malaysia could be attributed to the initiatives to prioritise entrepreneurship in TVET context. According to Ismail, Adnan, Masek, Hassan, Hashim and Ismail (2018), Malaysian TVET style is embedded in three models which are; a liberal model where industries dictate the skills and knowledge; the bureaucratic model where the power rests with the government and the dual system noted for partnership between institutions and industries. It implies that in the fusion of the three models, Malaysia seeks to utilise the full benefits of TVET and achieve the envisaged industrial revolution.

Overall, studies validate and continually applaud the labour market potentials of TVET – as education for work (Park, 2005; Bakar, 2011). However, the issue of the mismatch persists (Remington, 2018; Capelli, 2014; Deloitte and Manufacturing Institute, 2015; McGowan and Andrews, 2015; Organization for Economic Co-operation and Development (OECD), 2016; Wright, 2013); underemployment and unemployment after graduation (OECD, 2013; Hoffman and Schwartz, 2017); non-recognition of higher qualification (Ismail et al., 2018; Remington, 2018). The bigger challenges lie in graduates not fitting into the supposed careers due to poor skills (Remington, 2018) resulting from training conducted using obsolete equipment (Park, 2005; Baka, 2011) thereby requiring retraining by the industries (Remington, 2018) - as in the case of Nigeria and Malaysia (Okoye & Arimonu, 2016; Bakar, 2011) among others. In addition, there is a great gap between the two providers of TVET (public and private) in Nigeria and Africa. The private sector provides trainings that are directly profitable to its sustainability, often inconsistent with the public sector (Akoojee, 2016). The public sector on the hand faces great challenges of meeting with demands, management and funding of TVET alone without a clear guideline on exploring the private sectors. There is a need for the government to adopt UNESCO's recommendation of transforming its role to a regulator and not the sole provider of TVET for advancement and development (UNESCO, 2012).

Despite challenges, TVET no doubt has labour market potentials (Bakar, 2011) and according to Park (2005), encompasses the ability to facilitate economic growth, reverse poor labour supply and underperformance, and minimise unemployment and underemployment through the delivery of employability skills. Moreover, TVET fosters gender equality campaigns across policy documents. The issues of traditional and non-traditional occupations with respect to the female counterpart was bridged by granting equal access to career paths making TVET an inclusive education (Dee, 2007). However, what is the current situation of TVET concerning a quick transition to labour market? Again, if relevance is the extent to which the labour market demands were met and effectiveness evaluates achievement of objectives while efficiency explores the correlation between inputs and outputs (Park, 2005), then how relevant, effective and efficient is TVET? This paper, therefore, seeks to provide answers to these questions.

## 2. Methodology

This study employs an integrative multi-method approach using a descriptive survey and focus group discussion with participants as observers. According to Seawright (2016) multi-method research involves combining data-gathering and analysing techniques from two or more methodological traditions. The integrative design ensures that a claim regarding a set of finding was strengthened such that more confidence can be built on the causal effects. The instrument used for the study is a structured questionnaire titled TVET Labour Market Potentials Questionnaire (TLMPQ) partly adapted

(Section B – items 1-10; from Russo, Serafini and Ranieri, 2019) and partly developed by the researchers from the literature reviewed. Gjersing, Caplehorn and Clausen (2010) strongly affirm that adapting instrument, modifying language, terms and adding more items are necessary to suit new situations and context. The instrument was subdivided into two sections. Section A, demographic information section, was an introductory question seeking to ascertain for instance gender, area of specialisation, employment status and sector. Section B contained 17-item statement on the labour market potentials of TVET designed in accordance to five-point Likert scale. The response to the 17-items ranged from 5 - 1. (*Strongly Agree, SA = 5; Agree, A = 4; Neutral, N = 3; Disagree, D = 2; and Strongly Disagree, SD = 1*). Although items with lesser number of options can be used for research, Lozano, Garcí'a-Cueto and Muniz (2008), stated that instrument with response options between 4 and 7 is good enough for validity and reliability test. Three experts were purposefully selected to carryout face validation of the instrument while the reliability was ascertained using Cronbach alpha test of internal consistency. An overall internal consistency coefficient of 0.87 was obtained. According to the reliability guideline by Sekaran (2003), a coefficient from .60 is considered acceptable for research.

The population for the study comprised of all the 437 participants in a Homecoming/Conference programme organised by the Faculty of Vocational and Technical Education, University of Nigeria, Nsukka, Enugu State, Nigeria. The Faculty organised her first homecoming since its inception in 1960, embedded alongside a conference to allow participants opportunity to brainstorm and contribute to both academic and structural progress of the place where they all graduated from. The event, therefore, had dignitaries from all works of life such as ministers, vice-chancellors, deputy vice-chancellors, professors, uncountable PhD holders, masters and first-degree graduates were all in attendance. However, a non-probability sampling technique was used to acquire a representative sample for the study. This sampling technique is usually selected when random sampling seems unattainable. Thus self-selection sampling method was used in this study (Patton, 2001). Self-selection sampling allowed the individuals the opportunity of choosing to be part of the research.

Using the plenary or technical session as an advantage, the researchers seized the opportunity to distribute the questionnaire to different groups through direct contact. A total of 172 survey questionnaires were distributed while 153 copies were duly retrieved having allowed an appreciable time of three (3) hours. The retrieved instrument represents 89% return rate which was judged enough for the study. After the questionnaires were retrieved, the researchers organised a 15-man discussion panel, comprising of 2 professors, 5 PhD holders, 2 Master degree holders and 6 first degree graduates in different areas of TVET, for an in-depth dissection of the items seeking solutions and perhaps coherence views from the experts. Two questions needed to buttress or disprove inherent findings of the study were asked: (i) would you recommend TVET to your wards, relatives and friends, and why? (ii) Having been in TVET, what do you think could give adequate face-lift to the challenges retarding its potentials?

Data generated through the discussion and the questionnaires were coded accordingly to aid analysis using SPSS version 21. Data were analysed using descriptive statistics of percentage and mean to ascertain agreement of the respondents on the potentials. At the same time, comparisons between groups were done using Kruskal-Wallis H test, a non-parametric rank-based test used to determine significant differences among two or more groups of an independent variable, at 0.05 level of significance. Kruskal-Wallis H test is chosen when data do not meet the stringent assumptions of Analysis of Variance (ANOVA). Based on five points Likert scale, the mean of the scale is 3.50 (using real limit of numbers). Therefore, mean values of 3.50 and above were regarded as “Agreed”, while mean scores below 3.50 were regarded as “Disagreed.”

### 3. Results

The data presented in Table 1 shows the distribution of the respondents into five broadly classified TVET areas of specialisation as in: Agricultural education, Business education, Computer education, Home Economics education and Industrial Technical Education (as it is in the Faculty of Vocational and Technical Education, University of Nigeria, Nsukka). Each of the TVET areas thus classified has sections based on specific occupations or trade (Table 1). TVET is geared towards preparing individuals for gainful employment or self-reliance venturing in known occupations.

Table 2 shows more female dominance in areas related to Home Economics and Business Education, where 39 and 24 amongst 43 and 34 respondents respectively were female; the male number booms in areas related to Industrial Technical Education and Computer education with 26 and 18 from 29 and 25 respondents respectively. Agricultural education appears to have an equal representative in the study, indicating that both genders choose skill areas related to Agriculture. This finding is in line with Zuga (1999) and Wonacott (2002), who stated that female education follows a stereotype towards a particular career path while others were seen to be for the male. With respect to gender representative, the Table shows 47% of male and 53% of female among the respondents, although in favour of the female, it indicates gender equity in representation. This also buttresses the finding of Dee (2007) who posits that gender bias and inequality causes many problems in educational outcomes.

**Table 1 - TVET Areas of Specialisation**

| S/N | Areas of specialisation        | Labour Market Skill Option   |
|-----|--------------------------------|--|
| 1   | Agricultural Education         | Crop production<br>Livestock production<br>Agribusiness  |
| 2   | Business Education             | Accounting Education<br>Marketing Education<br>Secretarial studies   |
| 3   | Computer Education             | Hardware maintenance<br>Software development<br>Web design and content management                          |
| 4   | Home Economics Education       | Clothing & Textile<br>Food and nutrition<br>Hospitality Management<br>Child care & Dev.<br>Home Management |
| 5   | Industrial Technical Education | Automobile/ metalwork<br>Building/woodwork<br>Electrical/electronic  |

Besides, Table 2 reveals that 99% of the respondents were employed in diverse TVET areas across different sectors. It further shows that 91 (59%) were employed in the public sector, 33 (22%) in the private sector and 28 (18%) created jobs for themselves. The low rate of job creation among TVET graduates, according to Ismail *et al.* (2018) needs to increase to make TVET more responsive to the rising unemployment.

**Table 2 - Descriptive Statistics on The Demographic Information of The Respondents**

| Class                              | N  | Percentage (%) |
|------------------------------------|--|----------------|
| <b>TVET Area of Specialisation</b> | Agricultural Education<br>(10/12)        | 14             |
|                                    | Business Education<br>(10/24)            | 22             |
|                                    | Computer Education<br>(18/7)             | 16             |
|                                    | Home Economics Education<br>(4/39)       | 28             |
|                                    | Industrial Technical Education<br>(26/3) | 19             |
| <b>Gender</b>                      | Male                                     | 47             |
|                                    | Female                                   | 53             |
| <b>Employment Status</b>           | Employed                                 | 99             |
|                                    | Unemployed                               | 1              |
| <b>Employment Sector</b>           | Public                                   | 59             |
|                                    | Private                                  | 22             |
|                                    | Self-employed                            | 18             |

Similarly, results presented in Table 3 shows mean, standard deviation and decision on the 17 items of the questionnaire addressing labour market potentials of TVET. Table 3 shows that the mean of all the items but one (item

10 with 3.47) were above the cut value of 3.50, indicating that the respondents agree that TVET has labour market potentials. The standard deviation in Table 3 ranged 0.66-1.12, equally showing that variations in the responses were not far apart. The finding, therefore, suggests with respect to transition to the world of work, that the relevance of TVET cannot be overemphasised. Hence the potential seems to be the most crucial role played by TVET in many countries (Remington, 2018). According to Remington (2018), TVET creates a path for many to the chart for career upgrade, better positioning, and alignment of higher degree certificates with relevant skills, including integrating the “forgotten half”. The forgotten half includes drop-outs of all sorts, those who for one reason or the other could not further education either for a degree or for an associate degree. This all-important role makes TVET a panacea to ensuring all and sundry become relevant contributors to the national development and economy irrespective of abilities.

Furthermore, to ascertain the adequacy of the respondents sampled, Table 3 shows the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The KMO test in Table 3 obtained MSA value = .948. The MSA was above the acceptable threshold of 0.5 recommended (Keiser, 1974). According to Beaumont (2012), MSA value above .70 should be accepted while below should be discarded. Similarly, Bartlett’s Test of Sphericity for the items showed associated *p*-value of 0.000, necessitating a factor analysis.

**Table 3 - Mean and Standard Deviation of The Responses**

| Code | TVET labour market potentials  | Mean        | Standard deviation | N   | Decision  |
|------|--|-------------|--------------------|-----|-----------|
| 1    | TVET furnishes high quality learning                                     | 3.62        | 1.03               | 153 | Agreed    |
| 2    | TVET gives access to modern equipment                                    | 3.70        | 0.95               | 153 | Agreed    |
| 3    | Teachers in TVET are competent   | 3.60        | 0.99               | 153 | Agreed    |
| 4    | TVET enables people to continue in lifelong learning                     | 3.56        | 1.01               | 153 | Agreed    |
| 5    | People in TVET learn skills needed by employers                          | 3.87        | 0.83               | 153 | Agreed    |
| 6    | People in TVET learn communication and teamwork                          | 3.81        | 0.92               | 153 | Agreed    |
| 7    | TVET leads to well paid jobs   | 3.55        | 1.11               | 153 | Agreed    |
| 8    | TVET leads to jobs well regarded in society                              | 3.61        | 1.04               | 153 | Agreed    |
| 9    | TVET leads to professions which are highly demanded on the labour market | 3.56        | 1.04               | 153 | Agreed    |
| 10   | TVET offers good career opportunities                                    | 3.47        | 1.01               | 153 | Disagreed |
| 11   | Transition from school to work is quick in TVET                          | 3.62        | 1.12               | 153 | Agreed    |
| 12   | TVET exemplifies entrepreneurial studies                                 | 3.61        | 0.94               | 153 | Agreed    |
| 13   | TVET offers skills for self-reliant ventures                             | 3.71        | 0.96               | 153 | Agreed    |
| 14   | TVET needs improvement to meet labour market demands                     | 3.52        | 1.01               | 153 | Agreed    |
| 15   | Current output of TVET is equal to the investment                        | 3.52        | 1.06               | 153 | Agreed    |
| 16   | TVET encourages equal gender participation                               | 4.08        | 0.66               | 153 | Agreed    |
| 17   | TVET defines gender roles in labour market                               | 4.03        | 0.71               | 153 | Agreed    |
|      | <b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>                  | <b>.948</b> |                    |     |           |
|      | <b>Bartlett's Test of Sphericity Sig.</b>                                | <b>.000</b> |                    |     |           |

Table 4 shows that all the communalities of the items analysed were above 0.50, suggesting that the items according to Field (2005), met the requirement for factor analysis, hence, all items were retained for the factor analysis having shown a communality value equal or above 0.5. Principal component extraction with oblimin rotation were therefore used to determine underlying grouped potentials. Table 5 shows three underlying group potentials with eigenvalues greater than 1 extracted in this study (see Figure 1 for the Scree plot).

The Scree plot in Figure 1 shows the eigenvalues of principal components. In figure 1, there are three points of division necessitating the grouping of factors into three. It therefore shows the number of components required to explain each of the groupings at every point on the bar and above. Data in Table 5 also shows that the three underlying groupings explain 67.478% of the variance, which is higher than the recommended 60% (Malhotra, 2006). Following the outcome, all items were grouped into three (see Table 6).

**Table 4 - Communalities**

| Code | TVET Labour Market Potentials  | Initial | Extraction |
|------|--|---------|------------|
| 1    | TVET furnishes high-quality learning                                     | 1.000   | .646       |
| 2    | TVET gives access to modern equipment                                    | 1.000   | .633       |
| 3    | Teachers in TVET are competent   | 1.000   | .604       |
| 4    | TVET enables people to continue in lifelong learning                     | 1.000   | .786       |
| 5    | People in TVET learn skills needed by employers                          | 1.000   | .844       |
| 6    | People in TVET learn communication and teamwork                          | 1.000   | .817       |
| 7    | TVET leads to well-paid jobs   | 1.000   | .684       |
| 8    | TVET leads to jobs well regarded in society                              | 1.000   | .731       |
| 9    | TVET leads to professions which are highly demanded on the labour market | 1.000   | .689       |
| 10   | TVET offers good career opportunities                                    | 1.000   | .686       |
| 11   | Transition from school to work is quick in TVET                          | 1.000   | .665       |
| 12   | TVET exemplifies entrepreneurial studies                                 | 1.000   | .636       |
| 13   | TVET offers skills for self-reliant ventures                             | 1.000   | .691       |
| 14   | TVET needs improvement to meet labour market demands                     | 1.000   | .680       |
| 15   | Current output of TVET is equal to the investment                        | 1.000   | .600       |
| 16   | TVET encourages equal gender participation                               | 1.000   | .700       |
| 17   | TVET defines gender roles in labour market                               | 1.000   | .680       |

*Extraction Method: Principal Component Analysis.*

**Table 5 - Total Variance Explained**

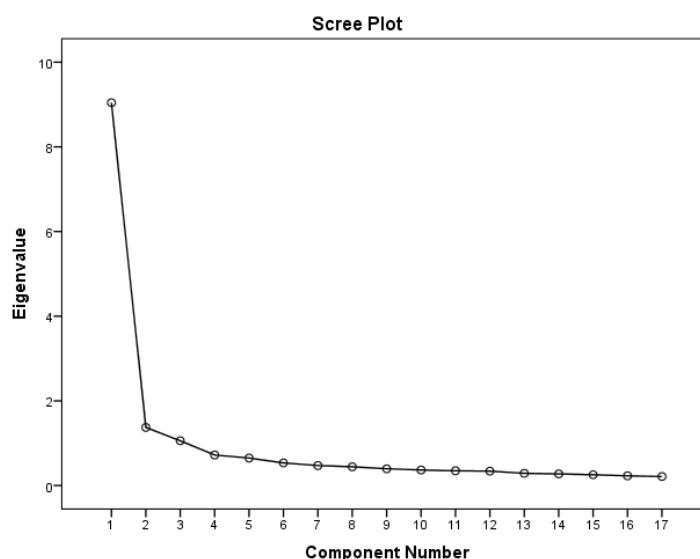
| Grouping | Initial Eigenvalues |               |              | Rotation Sums of Squared Loadings |               |              |
|----------|---------------------|---------------|--------------|-----------------------------------|---------------|--------------|
|          | Total               | % of Variance | Cumulative % | Total                             | % of Variance | Cumulative % |
| 1        | 9.043               | 53.192        | 53.192       | 9.043                             | 53.192        | 53.192       |
| 2        | 1.371               | 8.067         | 61.259       | 1.371                             | 8.067         | 61.259       |
| 3        | 1.057               | 6.219         | 67.478       | 1.057                             | 6.219         | 67.478       |

It is worth noting here that the discussion of the focus group organised for this study considered highlighting major potentials for which TVET holds a higher recommendation rate compared to general education. According to Russo *et al.* (2019), attitude towards TVET is sustained by the potential of the programme to connect recipients to world of work; a factor that equally sustains the recommendation to others. It was therefore necessary to ascertain experts' views towards finding answer to this 'all important' function of TVET. After the analyses, the grouping in Table 6 was compared with the experts' responses, considering the items in each grouping and their common characteristics, the underlying TVET potentials were thus named as: quality and upgraded learning environment, teachers and labour market information; relevant technical and employability skills, and established gender equality standards.

**Table 6 - Underlying factors of TVET labour market potentials**

| Code           | TVET labour market potentials  | Potential grouping |      |      |
|----------------|--|--------------------|------|------|
|                |  | 1                  | 2    | 3    |
| <b>Group 1</b> | <b>Quality and upgraded learning environment, teachers and labour market information</b> |                    |      |      |
| 1              | TVET furnishes high quality learning   | .823               | --   | --   |
| 2              | TVET gives access to modern equipment  | .788               | --   | --   |
| 3              | Teachers in TVET are competent   | .727               | --   | --   |
| 4              | TVET enables people to continue in lifelong learning                                     | .651               | --   | --   |
| 7              | TVET leads to well paid jobs   | .734               | --   | --   |
| 8              | TVET leads to jobs well regarded in society  | .862               | --   | --   |
| 9              | TVET leads to professions which are highly demanded on the labour market                 | .731               | --   | --   |
| 10             | TVET offers good career opportunities  | .783               | --   | --   |
| 11             | Transition from school to work is quick in TVET  | .844               | --   | --   |
| 12             | TVET exemplifies entrepreneurial studies   | .847               | --   | --   |
| 13             | TVET offers skills for self-reliant ventures   | .749               | --   | --   |
| 14             | TVET needs improvement to meet labour market demands                                     | .837               | --   | --   |
| 15             | Current output of TVET is equal to the investment  | .816               | --   | --   |
| <b>Group 2</b> | <b>Relevant Technical and employability skills</b>                                       |                    |      |      |
| 5              | People in TVET learn skills needed by employers  | --                 | .916 | --   |
| 6              | People in TVET learn communication and teamwork  | --                 | .851 | --   |
| <b>Group 3</b> | <b>Established gender equality standard</b>  |                    |      |      |
| 16             | TVET encourages equal gender participation   | --                 | --   | .836 |
| 17             | TVET defines gender roles in labour market   | --                 | --   | .816 |

Note: Extraction Method: Principal Component Analysis; Rotation Method: Oblimin with Kaiser Normalization.<sup>aa</sup>Rotation converged in 4 iterations.



**Fig. 1 -Scree plot of the responses to the questionnaire**

The data in Table 7 shows a Kruskal-Wallis H Test used to determine statistically significant differences in the responses with respect to the employment sector (public, private and self-employed) of the respondents. The result

showed that there was no significant difference in the TVET labour market potentials among respondents; chi-square = .921, *p*-value = .631 at 0.05 level of significance with a mean rank of 79.20 for the public sector employed, 77.40 for the self-employed and 70.58 for private sector employed respondents.

**Table 7 - Kruskal-Wallis H Test Results of TVET Labour Market Potentials by Public, Private and Self-Employed Respondents**

|               | Employment Sector | N   | Mean Rank | Test Statistics <sup>a,b</sup> |               |
|---------------|-------------------|-----|-----------|--------------------------------|---------------|
|               |                   |     |           |                                | MeanVariables |
| MeanVariables | Public            | 91  | 79.20     | Chi-Square                     | .921          |
|               | Private           | 33  | 70.58     | Df                             | 2             |
|               | Self-Employed     | 29  | 77.40     | Asymp. Sig.                    | .631          |
|               | Total             | 153 |           |                                |               |

a. Kruskal Wallis Test

b. Grouping Variable: EmploymentSector

#### 4. Findings and Discussion

The findings of this study showed slightly equal distribution of gender participation in the study. The study showed that the respondents were comprised of 47% male and 53% female, thus indicating gender balance (even in favour of female). This is in line with the findings of Zuga (1999) that there is an increased opportunity for women to engage in technical courses. Hence, Dee (2007) submitted that imbalance in gender can result in a negative educational outcome. Female participation in this study also lends voice to the belief that women in TVET have equal educational opportunities as males (Wonacott, 2002) with respect to employment and otherwise. More so, despite the unemployment witnessed in countries, 99% of the respondents in this study are employed in various sectors. Korean Education Development Institute [KEDI], (2004) discovered that TVET graduate employment is 92% compared to general education graduates at 56.7%. The transition from school to employment in TVET was further eased when the German dual system is adopted (Remington, 2018). Again, UNESCO (2019) with respect to information and communication technology stated that employment is not determined by high paper qualification from formal education but are skill-based. Therefore, tackling unemployment is the major need to turn towards TVET (Bakar, 2011).

Furthermore, the results of this study have shown that there is general agreement on the labour market potentials of TVET, as the respondents agreed to 16 of the 17 items. It holds that TVET is capable of providing high-quality learning opportunities with access to quality equipment, thereby ensuring a quick connection to the labour market (Russoet al., 2019; Remington, 2018). Russo *et al.* (2019) discovered that the major potential to the success of TVET is its ability to link up graduates to the world of work. Supporting the finding that TVET enrolees learn skills needed by the employers, Paris21 (2018) stated that TVET is leading nations such as Germany out of recession with the increase in youth employment, unemployment decline, a moderate increase in remunerations and increased participation. In the same light, communication and teamwork skills are regarded as employability skills (Bakar, 2011) and are seen as a rudimentary acquisition made possible by TVET. The need for employability skills above technical knowledge and skills that lack transferability has necessitated the improvement of TVET learning environment, teaching and teachers to ensure supply of highly-skilled labour force (Boutin, Chinien, Moratis & Baalen, 2009). Similarly, there is no doubt in the ability of TVET to offer lifelong learning opportunities. Literatures show certain individuals in the face of changing work environment migrate to an entirely new career learnt for survival and diversification purposes (Bakar, 2011). On entrepreneurial abilities of TVET, Afeti (2006) strongly affirm that TVET is a good example of the pathway to entrepreneurship education as it fosters employable skills leading to self-reliant venturing. Contrary to the agreements of the respondents, the result from the study showed that the notion that ‘TVET offers good career opportunities’ was disagreed. The reason is not far from issues surrounding mismatch. If training is offered to the learners of this generation in an obsolete environment, using out-dated equipment, anchored by uninformed teachers and based on labour data of the old, the expected career opportunity cannot be realised (Remington, 2018; Paris21, 2018; Boutin et al., 2009). It, therefore, suggests that the disagreement stems from the immediate learning environment of the Nigeria TVET institutions – where non-functional and obsolete equipment litters every laboratory and workshop (Chukwu & Omeje, 2018) – yet different from the current machines used in the industries. As observed by Zite and Deebom (2010), lack of updated learning environment has equated TVET in Nigeria with general education, focusing on the paper certificate without relevant employability skills. Career progression is certainly ridiculed when recipients’ skills cannot be utilised in today’s industry.



In the context of this study, findings reveal three underlying factors to ensure that TVET remains relevant without losing its potentials. It was found that quality and upgraded learning environment, teachers and labour market information, relevant technical and employability skills, as well as established gender equality standard, are necessary steps to maintaining the potentials so embedded in TVET. It goes to say that TVET would be as good as the learning environment wherein the graduates are trained. Many institutions are still struggling with maintaining obsolete training facilities, whereas others have moved on with upgraded teaching and learning environment. Positioning TVET as the 'most productive element of education' (Schnarr, Yang & Gleibner, 2008) requires more than the current inputs. It has equally been noted in the literature that government can control TVET to ensure compliance with bodies but cannot finance TVET alone; hence TVET systems became shared burden between industries and institutions of learning across developed nations (Remington, 2018; Kruss, Petersen, Fongwa, Tele & Rust, 2017; Hawley, 2009). Teachers, on the other hand, require retraining and upskilling in modern equipment and using technology in facilitating learning. Literature posits that teachers are no longer the custodians of knowledge but facilitators who should guide students to meaningful learning outcomes (Bakar, 2011). To achieve these, the teachers need exposure to the 21st-century teaching requirements which many are not abreast with. Paris21 (2018) added that accurate labour market data is necessary for the actualisation of TVET potentials; thus Labour Market Information System (LMIS) is vital. LMIS, according to Paris21 (2018) is an interconnected procedure and mechanism where stakeholders at different levels can collect, process, store, analyse and share labour market data for ideas across the board in ensuring improvements. This will ensure that training was organised in line with the demand of the labour market; a function the labour market owes the institutions of learning (Serena, 2017).

More so, the skills needed in this dispensation are beyond technical knowledge and skills. Gray and Bae (2009) highlighted that it is lack of employability skills that leads to graduate unemployment, corroborating the assertion that employability skills is more generic than specific occupational/technical skills, and are needful across different industry types and businesses (Robinson, 2000). According to the Conference Board of Canada (2010) employability skills are required for career entry, progress and for meaningful contributions in the world of work. Moreover, employability skills are required of both genders just as occupations were campaigned to favour both. This study found that gender equality potential of TVET is one key selling factor of TVET education system. Studies prove that there has overtime been traditional and non-traditional occupations with respect to gender. Women take part in traditional-occupations such as hair dress, makeup, clothing and textile, while men are seen in constructions, mechanical, electrical/electronic, among others (Bhatta, 2016). However, the subject of all-inclusive TVET has been expressed in many policy documents and researches (UNESCO, 2003; 2014). It, therefore, behoves the providers of TVET especially the institutions to advocate farther than the current level and hold government and industries, to agree beyond lip service, to explore the potentials of TVET, tackle the challenges to address the unemployment in Nigeria.

Meanwhile, the relevance of TVET is same in various sectors, public, private or self-reliance ventures. It is imperative as the same skills are required to function in any of the sectors. The study found that there is no significant difference in TVET labour market potentials among the public, private and self-employed respondents, hence, the p-value of .631 at 0.05 level of significance. This is in line with the findings of Remington (2018), as TVET affords a sure means of ensuring that no one is left out in contributing to the national economy. Every recipient of TVET programme easily finds a niche among the sectors for sustenance, thereby contribute to national development.

## 5. Conclusion

The purpose of this study was to assess the labour market potentials of TVET, using opinions of the conferees who have studied with diverse working experiences to attest. The study simply questions the current situation of TVET in its 'all important function' of affording learners or graduates quick transition to the labour market. A questionnaire with 17-items was used as an instrument, as well as a focused group discussion for clarifications. The first ten items of the survey were adopted while the researchers developed an additional seven based on available literature. Responses were sought from 153 Alumni Conferees of the Faculty of Vocational and Technical Education during her first international conference and homecoming.

The participating experts agreed that TVET has strong labour market potentials necessary for employment creation, entry and advancement for both genders, as well as for lifelong learning, diversification and economic stability. However, for TVET to retain the ability to offer excellent career opportunities, improvement in terms of upgrades are needed in the environment for effective teaching and learning, teachers and methods of teaching. It is vital as no one master's trends and development in industries having learnt with obsolete equipment. It is, therefore, essential to ensure that the most outstanding potential of TVET in providing a quick transition to the world of work was not eroded due to deficient and obsolete learning conditions.

## 6. Limitation

The authors intended to assess the general view of conferees, judged to be experts, on the labour market potentials of TVET programme, with the view of having a negative response to necessitate further discussions on crucial issues for improvement towards policy adjustment actions. Limitation, therefore, begins with the nonchalant attitude of conferees in participating in the study. We recommend that future studies could employ purposive sampling of respondents using

the yearly graduation register and follow-up on the graduates as the current study could not take that path. Again, the opinion of graduates can be compared with that of their employers to ascertain differences in perception. Future studies should use larger sample size, involve more parties and obtain variable perceptions of the general populace on TVET even from awareness. Lastly, more studies could be carried out to verify the findings of this study.

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