

A Novel Employability Model for Enhancing Job Readiness and Career Development among Nigerian Graduates

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Abstract

This paper presents a novel employability model for enhancing job readiness and employability among Nigerian graduates. The study was motivated by increasing rate of graduates' unemployment and the need for education system reforms and curricula re-engineering. The Southeast region consistently recording highest universities enrollments, and graduates annually, was selected as sampling area. The research scope is limited to public universities and private sector employers. Purposive sampling was applied in selecting a sample of 144 multi-stakeholders participants. Participants include 80 students in their graduating level having cumulative grade point average of 3.50 and above, 50 faculty/academic administrators, and 14 human resources managers of selected private sector employers. A Likert 5-point scaled instrument was used for data collection. Qualitative responses were quantified and subjected to multi-variate error correction model analysis. Results shows that in the short term, academic achievement and work-integrated learning all have significant negative effects on education training outcome (job readiness), while in the long term, that of academic achievement becomes positive and significant. The paper concludes that the novel employability model has high likelihood of bridging employability skills gaps of traditional training outcomes, thereby enhancing job readiness and career development among graduates. Hence, adoption of the model by universities is recommended as curricula re-engineering and educational system reform strategy.

Keywords: Employability Model, Job Readiness, Career Development, Traditional Academic Achievement, Work-Integrated Learning, Education System Reform, Curricula Re-Engineering.

Introduction

Poor educational training outcomes signal inadequate human capital development efforts that hinder national productivity, economic growth and sustainable development (Tight, 2023; Dănăcică, et al., 2023; Jackson, 2021). Stakeholders must collaborate to enhance employability amid a global economy increasingly reliant on creativity and innovation (Mainga, et al., 2022). Despite rising numbers of academically high-performing graduates from Nigeria's TEIs, many face slow career transitions, resulting in underemployment and

unemployment five years post-graduation. This issue stems from significant gaps between TEI curricula and the competencies demanded by employers (Ebiringa, et al., 2015). Such discrepancies contribute to Nigeria's high youth unemployment rates, with reports indicating an 8.6% underemployment rate among youths as of Q3 2023 (NBA, 2023). Many graduates from Nigeria's TEIs lack essential employability skills, which hampers their technical capabilities and career advancement (Carter, et al., 2019; Brown & Souto-Otero, 2020). Moreover, curricula of most TEIs developing countries Nigeria inclusive tend to prioritize theoretical knowledge over work-integrated learning that offers practical experiences, thereby impeding job readiness (Yanes et al., 2023; Mgaiwa, 2021; Ebiringa, et al., 2015). Therefore, addressing the alignment between TEI curricula and industry skills is critically essential to reposition human capital development efforts in such countries.

Problem Statement

Most Nigerian TEIs inadequately promote employability skills due to a focus on static theoretical curricula misaligned with dynamic labour market demands (Bennett, 2019). This results in traditional academic achievements that fail to enhance practical skills such as self-awareness, emotional intelligence, critical thinking and problem-solving (Brown & Souto-Otero, 2020; Ebiringa, 2013). Thus, there is a critical need for a new employability model that combines academic success with work-related skills, acquired through work-integrated learning that improves educational outcomes (Rathee & Mittal, 2024). The anticipated short-term benefits include improved job readiness for graduates, while long-term effects encompass sustainable career growth (MacCann, et al., 2020). Urgent reforms in the educational system, particularly curriculum re-engineering and re-design, are necessary to address Nigeria's unemployment crisis. Ultimately, improved job readiness and career development will provide employers with a skilled labour force, fostering national productivity, economic growth, international competitiveness and sustainable development (Sarkar, et al., 2020).

Study Objectives

The aim of this paper is to formulate a novel employability model that integrates academic achievement with work-integrated learning drivers using the southeast region of Nigeria as study area. Specifically, the objectives include to:

- a) assess the effect of novel employability model drivers on job readiness among Nigerian graduate;
- b) investigate the effect of novel employability model drivers on career development among Nigerian graduate.

To achieve these objectives, the study focused exclusively on five selected public universities. The 2023 convocation ceremonies of each sampled university were utilized for fieldwork, involving surveys and interviews to collect data from selected graduating students, lecturers/education administrators, and captains of industry (employers of labour) who attended the events. By meeting the stated objectives, this paper contributes

valuable insights to the ongoing national discourse on Nigeria's educational system reforms and human capital development for enhanced productivity, economic growth, and sustainable development.

Theoretical Background

Employability is a multifaceted construct involving academic qualifications and work-related skills acquired through work-integrated learning that facilitate career advancement (Abelha, et al., 2020). The traditional CareerEDGE model delineates five essential components: career development learning, work experience, subject knowledge, generic skills, and emotional intelligence. This model underscores the imperative for graduates to cultivate both technical and interpersonal skills to satisfy labour market demands and employer expectations (Battu & Bender, 2020).

Moreover, research indicates that higher educational institutions (HEIs) in developed economies employ varied strategies to bolster employability (Brown & Souto-Otero, 2020). Innovative employability models involve curricular modifications that merge work-integrated learning and entrepreneurship training with traditional academic courses, alongside structured internships aligned with students' career goals (Mohammed & Ozdamli, 2024). Successful implementation of these models relies on robust collaborations between HEIs and industry stakeholders, crucial for aligning educational content with labour market requirements and enhancing students' practical competencies (Carter, et al., 2019).

The literature highlights the necessity of cultivating both hard and soft skills through engagement in extra-curricula programmes such as students' entrepreneurial business clubs (Dănăcică, et al., 2023; Ebiringa, et al., 2015). Consequently, contemporary education should prioritize skills development, leading to the deliberate integration of multidimensional out of classroom programmes that offer work-related learning experiences and industry exposure via internships, mentorships, and networking (O'Regan, et al., 2022; Ebiringa, et al., 2015).

Assessing job readiness is vital for assessing and enhancing graduates' employability, involving systematic evaluations of students' competencies to identify gaps that may hinder workforce transition and career progression (Choi, et al., 2020). Effective job readiness assessment supports curriculum assessments and alignment with industry standards (Gawrycka, et al., 2020). The novel employability model provides a holistic framework for understanding graduate job readiness by outlining necessary competencies for stakeholder satisfaction during the transition from education to career (Jackson & Tomlinson, 2020). This model assists educational institutions in aligning curricula with industry expectations to improve educational outcomes.

The importance of practical training and experiential learning in fostering job readiness and career development is paramount (Lauder & Mayhew, 2020). Research evidence demonstrating that experiential learning opportunities like internships significantly bolster students' employability by providing real-world experiences that complement academic

learning (Jackson, 2021). Such experiences not only enhance technical skills but also develop critical work-related skills including communication effectiveness, teamwork, problem-solving and entrepreneurship (Lock, 2019). Additionally, work-integrated learning enhances students' self-confidence and adaptability, traits highly regarded by employers (Liangxing et al., 2024).

Key methodologies for assessment of job readiness and career development encompass academic achievement and work-integrated learning (WIL) that play crucial role in developing job readiness and progressive career development (Lock, 2019). WIL typically include internships, mentoring, industry networking, and project-based learning that facilitates the application of theoretical knowledge in real-world contexts (Jackson & Tomlinson, 2020).

TEIs in developed countries are increasingly implementing systematic evaluations of employability skill development programmes, with focus on aligning curricula with industry needs based on employer feedbacks (Lauder & Mayhew, 2020). Some universities have established employability index systems that classify skills into various indicators, such as practical experience and communication skills (Maslov & Zhong, 2020). These indices facilitate the monitoring of student advancement and highlight areas for improvements, promoting a holistic approach to skill acquisition (O'Regan, et al., 2022).

Despite the potential benefits of these methodologies, challenges persist, including limited resources and the necessity for ongoing adjustments to shifting labour market requirements (Mgaiwa, 2021). TEIs are required to continuously reconcile academic standards with the practical development of skills to satisfy both student and employer demands (Martin & Muñoz de Luna, 2023). Graduate employability is also shaped by critical factors such as adaptability, transferable skills, social networks, and emotional intelligence (Mgaiwa, 2021). These components are essential for equipping graduates for an evolving labour market. Job readiness assessments can systematically evaluate and enhance the essential skills and competencies for successful career (Sarkar, et al., 2020).

The advantages of a novel model that tracks job readiness and career development comprise improved data application, alignment with industry expectations, and student empowerment. (Jackson, 2021). By continuously assessing employability and integrating work-integrated learning, TEIs can more effectively prepare graduates for purposeful career by aligning educational content with industry standards (Gawrycka et al., 2020). Furthermore, the novel employability model supports work-related skills development, industry connections, and mentorship, thereby aiding students in making better-informed career decisions that increases their career prospects (Tight, 2023).

Nonetheless, TEIs especially those in developing countries such as Nigeria, encounter considerable obstacles adopting novel employability models. This stems from such challenges as inconsistent data quality, resistance to change, insufficient resource availability, and limited industry collaboration opportunities they often face (Dănăciță, et al., 2023; Battu & Bender, 2020; Bennett, 2019; Ebiringa, et al., 2015). To tackle these challenges, the comprehensive policy regime that emphasize data integrity, stakeholder

engagement, and appropriate resource allocation (Mohammed & Ozdamli, 2024) need be put in place. By embedding work-integrated learning within curricula and promoting partnerships with industry, TEIs in Southeast Nigeria can better equip students for global competitiveness. However, excessive fixation on job readiness and career development enhancement might result in a limited emphasis on measurable altitudinal outcomes, potentially undermining the broader educational objective of nurturing character among students.

Methodology

Purposive sampling was applied in selecting a sample of 144 multi-stakeholders participants, made of 20 students in their graduating level having cumulative grade point average of 3.50 and above and 10 faculty/academic administrators selected from each of the five universities, and 14 human resources managers representing respective Chambers of Commerce in the Amalgamated Southeast Consultative Forum of private sector employers were sampled. A Lirkert 5-point scaled instrument was used for data collection. Qualitative responses were quantified and subjected to multi-variate error correction analysis (Bekele & Ago 2022; Ezirim, et al., 2004). Survey was applied to collect weighted opinions on job readiness, career development, academic achievement and work-integrated learning. Interview was used to gain deeper insights on perspectives of multi-stakeholder groups on the key issues of academic achievement, work-integrate learning, job readiness and career development (Bekele & Ago, 2022). The study population include fresh graduates, and faculties/education system administrators of the five selected public universities (Abia State University Uturu, Federal University of Technology, Owerri, University of Nigeria Enugu Campus, Alex Ekweme Federal University Abakilike, and Nnamdi Azikwe University Awka, and private sector employers in the study area. The data collection instrument contained structured questions grouped into four broad sections of academic achievement, employers' expectations (job readiness), career development and work-integrated learning (communication effectiveness, critical thinking, problems solving and entrepreneurial orientation, self-awareness and emotional intelligence). The analysis tool of econometric error correction model is adopted with the general and structural model specifications as in equations 1 and 2.

$$ETO = f [AA, CCS, CTS, EIS] \quad \dots 1$$

While the structural form of the model is as in equation 2.

$$ETO_{it} = \beta_0 + \beta_1 AA_{i,t} + \beta_2 CCS_{i,t} + \beta_3 CTS_{i,t} + \beta_4 EIS_{i,t} + e_{i,t} \quad \dots 2$$

Where:

ETO = Education training outcomes

AA = Academic achievement

CCS = Communication effectiveness,

CTS= Critical thinking, problems solving and entrepreneurial orientation.

EIS = Self-awareness and Emotional intelligence.

ETO (education training outcomes) is the dependent variable, while AA, CCS, CTS and EIS are the explanatory variables.

The explanatory variables are the measures and drivers of employability. The paper hypothesizes that a novel employability model that is driven by academic achievement and work-integrated learning leads to enhanced education training outcomes. This hypothesis is test for short- and long-term effects dynamics at 5% level of significance.

Ethical approval was obtained from the relevant institutions' review board prior to data collection. Participants were informed about the purpose of the study, their right to withdraw at any time, and confidentiality measures that protect their identities (Choi, et al., 2020). Informed consent was obtained from all participants before conducting surveys or interviews. The reliability of the results reported in this paper may be limited by the potential data bias associated with self-reported responses from graduates and employers (Dănăciă et al., 2023). Additionally, challenges were encountered in accessing previously documented data from the sampled universities and employers due to policies restricting staff from disclosing official information to outsiders, which rendered the application of data triangulation impossible in this study. However, irrespective of the above limitations, adequate assumptions were made in the outlined methodology to ensure that a comprehensive approach was adopted in investigating the applicability of novel employability perspective to tertiary education for enhanced graduates job readiness, career transition and development (Tight, 2023). By employing a mixed-methods design, this paper provided valuable insights and perspectives to Nigeria's tertiary education systems reforms and innovation for improved outcomes and impacts.

Results

The weighted responses obtained were quantified and subjected to error correction model econometric analysis. The objective is to formulate a novel model for predicting short and long joint effects of academic achievement and work-integrated learning on education training outcomes as earlier identifies in equation 2.

Table 1: Summary of short run model parameter estimates.

Dependent Variable: D(ETO). Independent Variables: AA CSS CTS EIS Included observations: 143. Dependent lags: 1 (Fixed). Fixed regressors: C				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
COINTEQ01	-0.622244	0.221943	-2.803617	0.0064*
D(AA)	-0.652682	0.364433	-1.790955	0.0774
D(CSS)	-4.614540	1.809424	-2.550282	0.0128*
D(CTS)	-0.021879	1.097797	-0.019930	0.9842
D(EIS)	-49.88725	54.98775	-0.907243	0.3672
C	37.57559	10.69718	3.512664	0.0008*
STATISTICS				
Mean dependent var	-0.498907	S.D. dependent var		8.823471
S.E. of regression	5.626858	Akaike info criterio		5.838028
Sum squared resid	2342.953	Schwarz criterion		7.441157
Log likelihood	-373.3661	Hannan-Qui crite.		6.489149

*significant at 5% level of significance.

Source: Authors Computations. (2024)

Thus, the resulting short run relationship model is given in equation 3.
 $D(ETOI)_t = 37.58 - 0.65D(AA)_{t-1} - 4.61D(CSS)_{t-1} - 0.02D(CTS)_{t-1} - 49.89D(EIS)_{t-1} - 0.62et . (3)$

Equation 3 based Table 1, indicates that in the short term the coefficients of all the explanatory variables are negative. Implying that one year after graduation, graduates of the sampled universities still fall short of meeting the basic requirements of employability as required by employers and the labour market. The implication of the obtained results from Table 1 is that the sampled graduates are not job ready one year after graduation from the universities. However, the coefficient of CSS (Communication effectiveness) is the only explanatory variable that is significant at 5% level, while the others AA (academic achievement CTS (critical thinking, problems solving and entrepreneurial orientation) and EIS (self-awareness and emotional intelligence), were found to be insignificant at 5% level. This finding is in agreement with those reported by Mainga, et al., (2022) and Rathee and Mittal (2024). When this result is viewed from the the perspective of the traditional CareerEDGE model theory that specified five essential components of quality education as career development learning, work experience, subject knowledge, generic skills, and emotional intelligence, the implication is that the education training currently offered by TEIs in southeast Nigeria is not of enough good quality to produce graduates that are job ready to transit into progressive career.

A further implication of the obtained results is that the academic journey of graduates from the five sampled universities may only lead to the development of communication skills, although the effectiveness of such skills is questionable, given the negative correlation between CSS and AC as indicated in Equation 3. An interesting observation from Equation

3 is that the only positive parameter, +37.58, is the model's constant term. This implies that any positive outcomes exhibited by the graduates are based on general communication knowledge and skills, likely residual from years of writing examinations at the primary, secondary, and tertiary stages of education. These results align with those previously reported by Tight (2023) and Brown and Souto-Otero (2020).

Another insight of equation 3, though unfortunate is the negative insignificant coefficient of AC (academic certification), which seem to affirm that academic certification does not sufficiently imply significant preparation of graduates for job readiness. This result agrees with those of Mohammed and Ozdamli (2024) and Mainga, et al., (2022). Interestingly, the error term of 0.6222 of equation 3, indicates that disequilibrium in the graduate's readiness tracking model normalizes at the speed of 31.11% per annum, implying that the journey of acquiring most of the employability skills graduates lacked at the point of graduation starts immediately they start their National Youths Service Corp (NYSC). This is an indication of latent career transition and development abilities.

Table 2: Summary of long run relationship model estimates.

Dependent Variable: D(GOI). Independent Variables: AC CSS CTS EIS Included observations: 143. Dependent lags: 1 (Fixed). Fixed regressors: C				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
AC	0.616649	0.115597	5.334448	0.0000*
CSS	1.372818	0.333031	4.122199	0.0001*
CTS	-0.792521	0.238252	-3.326399	0.0014*
EIS	-1.846616	0.201303	-9.173298	0.0000*
STATISTICS				
Mean dependent var	-0.498907	S.D. dependent var		8.823471
S.E. of regression	5.626858	Akaike info criterio		5.838028
Sum squared resid	2342.953	Schwarz criterion		7.441157
Log likelihood	-373.3661	Hannan-Qui crite.		6.489149

*significant at 5% level of significance.

Source: Authors Computations. (2024).

$$D(GOI)_t = 0.62AC_{t-1} + 1.37CSS_{t-1} - 0.79CTS_{t-1} - 1.85EIS_{t-1} \quad \dots \quad 4$$

Equation 4 based on Table 2, indicates that all the explanatory variables are significant at 5% level, implying that all the four explanatory variables have significant impacts on graduates' career transition and future development. Further, the coefficients of AC (academic certification) and CSS (Communication competence skills) in equation 4 are positive and significant, implying that the two variables are the only two factors acquired by graduate through their formal education that supports them in their career transition efforts, development and progression after graduation.

Unfortunately, the coefficients of CTS (critical thinking, problems solving and entrepreneurship skill) and EIS (self-awareness and emotional intelligence skills) are all

negative and significant, implying that at the point of graduation they lack the two very important categories of employability skills, which of course constitutes temporary holdless and limitations to the career transition, development and future progression.

Testing of hypothesis.

To test the joint significance of the academic performance and novel employability skills development proxies as in equation 4, the Wald coefficient diagnostic test is carried out. The null hypothesis is 'H₀: AC = CSS = CTS = EIS = 0, which assumes academic certification and employability skills development programmes do not jointly influence graduate job readiness, career transition, development and progression in the southeast region of Nigeria. The summary of the Wald test of the model is in Table 3.

Table 3: Long Run Wald Coefficients Diagnostic Test.

Test Statistic	Value	Df	Probability
F-statistic	32.17513	(4, 74)	0.0000 *
Chi-square	128.7005	4	0.0000 *

*significant at 5% level of significance.

Source: Authors Computations. (2024)

Table 3 shows that the F-statistic and Chi-square test statistical probability values are all less than 5%, thus further confirmation of the validity of equations 3 and 4, leading to the rejection of the null hypothesis and the conclusion that integrative implementation of academic performance and novel employability skills development enhancement programmes will jointly influence graduate outcomes (job readiness, career transition, development and progression) of TEI in the southeast region of Nigeria.

Discussions

The results obtained in this study emphasizes urgent need for a paradigm shift in educational policies by Nigeria's TEIs, from traditional educational models to ones that focus on employability skills development and reflects broader societal changes. This is in agreement with Abelha, et al., (2020), insist that there is expectation that tertiary education system should directly contribute to job readiness and career development by blending integrated work-related trainings into academic programmes curricula. This shift in perspective underscores the need for universities to urgently re-engineering their academic programmes curricula to align with the skills requirements and expectations of the labour market.

Equally the findings of this paper having been based on opinions expressed by multi-stakeholder groups, confirmed the importance of collaborative approach between universities and the industry towards addressing the problems of poor-quality educational training outcomes and youth unemployment in Nigeria. Yanes, et al., (2023) argued that shared responsibility among all stakeholders (employers, educators, and policymakers) is

crucial for bridging the gap between education outcomes and employment expectations. The novel model formulated in this paper, will not only improve quality of academic programmes curricula, but also ensures that graduates are better prepared for real-world challenges.

This paper further revealed the diversity of employability skills development beyond traditional academic achievement. This is consistent with, Liangxing, et al., (2024) that categorizes skills development into six dimensions, and highlighted the importance of social capital (self-awareness and emotional intelligence) and individual attributes (creativity, critical thinking, problems solving) alongside academic qualifications. This comprehensive approach as found in this paper has the likelihood of allowing for a more nuanced understanding of what constitutes employability in contemporary global labour markets. Above all, this paper has indicated a significant gap in robust evidence linking employability activities to tangible graduate outcomes. This aligns with the earlier findings of Mohammed and Ozdamli (2024), who reported a pressing need for larger-scale studies to track students from education into employment and provide insights into how different TEI programs impact various demographics. This finding is expected to be instrumental in refining the existing academic programmes of Nigeria's TEIs, ensuring they meet both educational and market needs.

Conclusion and Recommendations

This study has revealed that the persistent challenges faced by graduates in Nigeria, particularly in the southeast region, where employers often report a lack of preparedness among new employees is due to lack of implementation of novel employability skills development programme alongside the traditional academic curricula. This situation calls for a reevaluation and reform of educational system, policies, strategies and practices in close collaboration with industry stakeholders and regulators. This will ensure TEIs in southeast Nigeria align their academic programmes curricula with industry expectations, leading to adequate preparation of students for real world employment and jobs creation upon graduation.

Consequently, this paper recommends that universities in southeast Nigeria need to urgently reform their operational strategies by adopting and implementing the novel employability model programme, give its proven likelihood of innovating and re-engineering the academic programmes of TEIs for enhanced graduate job readiness and career development as empirically established in this paper. This change in policy and strategies is essential for reversing the current negative trajectory of graduates' lack of readiness for jobs, slow career transitions, development and progression. With the innovative novel employability dynamic model, TEIs in southeast Nigeria will be better positioned to deliver impactful skills based academic programmes that adequately prepares their students for the real world of work and enhanced competitiveness in the globalized labour market. Of course, given the dynamics of the operating environment, effort must be made by Nigeria's TEIs to continuously review and update their novel

employability model through research and development, in collaboration with industry stakeholders. This is essential not only for addressing existing knowledge and skills gaps but also for being proactive in responding to those that will arise in future. To this extent, this paper further recommends that TEIs in Southeast Nigeria should increase their commitment to taking responsibility and being accountable for the quality of academic programmes they offer to their students. Furthermore, TEIs in Southeast Nigeria should urgently refocus their key performance indicators (KPIs) on graduates' job readiness, career transition speed, sustainable career development and progression. By doing so, TEIs in Southeast Nigeria will effectively fulfill their mandate of facilitating human capital development for national productivity, economic growth, and sustainable development.

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