



The Impact of Industry Partnerships on the Employability of Vocational and Technical Education Graduates in Emerging Economies: A Case Study of Lagos State, Nigeria

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Abstract

This study was conducted to determine the impact of industry partnerships on the employability of vocational and technical education graduates in emerging economies using Lagos State as a case study. A descriptive survey research design was adopted for the study. The population of the study was 289 which consisted of staff of five large organisations in Nigeria. No sample was drawn because the population was manageable. A questionnaire of thirty (30) items was developed from the literature and used for data collection. The mean and standard deviation were used to analyze the research questions while analysis of variance (ANOVA) was used to test the hypothesis. Based on the findings, it was concluded that industry partnerships are essential to improving VTE graduates' employability in Nigeria because collaborations play a vital role in bridging the gap between education and work by matching job placements, practical experience, and educational outcomes with industry demands. It was therefore recommended, amongst others, that VTE curriculum planners update the curriculum to reflect current industry standards and more hands-on training.

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Background

Vocational and Technical Education (VTE) is essential for providing people with real-world skills that are suited to different industries. Improving VTE graduates' employability is essential for economic growth and maintaining competitiveness in the global market in emerging economies. According to the National Bureau of Statistics (NBS), the unemployment rate in Lagos State was 19.5% in 2022, with a significant portion being VTE graduates (NBS, 2022). Adekola et al. (2021), noted that roughly 25% of VTE graduates in Lagos State find work in their field of study within the first year after graduation. One significant strategy that could be used to achieve the employability of VTE graduates is through industry partnerships, which bridge the gap between educational institutions and the labor market. According to UNESCO-UNEVOC (2020), Industry partnerships are collaborative relationships between enterprises and educational or training institutions, designed to enhance the employability of graduates and the productivity of businesses. These partnerships facilitate the exchange of knowledge, resources, and expertise to ensure that vocational education and training programs are aligned with industry needs. Contextually, industry partnerships are collaborative efforts between VTE institutions and industries to increase the employability of graduates of vocational and technical programs and better integrate them into the workforce by matching course requirements with industry demands.

Employability refers to the set of skills, knowledge, and competencies that enhance an individual's ability to secure and retain employment, adapt to the changing demands of the job market, and contribute productively to their workplace. This includes both hard skills specific to a job or industry and soft skills such as communication, problem-solving, and teamwork (World Bank, 2021). In the context of this study, employability is the capacity of VTE graduates to secure and maintain a job or employment as well as grow in their professions. International Labour Organization (2023) noted that vocational and technical education (VTE) provides learners with the skills and competencies required to perform a particular job or group of jobs. It focuses on both the acquisition of practical skills and the application of theoretical knowledge to solve real-world problems, emphasizing the importance of lifelong learning to adapt to changing labour market conditions. Vocational and technical education (VTE) emphasizes the integration of theoretical and practical learning to satisfy labour market demands, and also acquire skills necessary for bringing productivity in emerging economies.

Emerging economies according to International Monetary Fund (2023), are characterized by their rapid economic growth, structural transformation, and increasing role in the global economy. These countries typically exhibit high growth rates, rising incomes, and ongoing reforms to modernize their economies. Emerging economies often face challenges such as income inequality, infrastructure gaps, and institutional weaknesses. Nigeria is among emerging economies since the country is experiencing rapid economic expansion and development recently, and gradually moving from low-income to middle-income status. Nigeria is frequently encountering difficulties with infrastructure, social inclusion, and governance. To ascertain better ways of helping VTE students acquire skills, it is important to find out the types of industry partnerships existing in emerging economies.

Industry partnerships involve collaborations between educational institutions and industries to align educational outcomes with industry requirements. These partnerships can take various forms, including internships, apprenticeships, curriculum development collaborations, and cooperative education programs. Such partnerships are designed to ensure that VTE graduates possess the skills and experiences needed to meet current job market demands. Smith (2018), stated that internships and apprenticeships provide students with hands-on experience in their field of study, which is crucial for enhancing their practical skills and employability. The author maintained that curriculum development entails involving industry experts in curriculum design and with these educational institutions can ensure that their programs remain relevant to the needs of employers. Jones (2017), noted that the cooperative education model integrates academic learning with professional work experience, often involving alternating periods of study and employment. Wilson (2015), stated that industry-sponsored projects or competitions, work-based learning initiatives, joint research and development initiatives, talent pipeline initiatives, training and professional development, and consulting and advisory services are types of industry partnerships. Therefore, it is imperative to say that these types of industry partnerships can help improve the employability of VTE graduates.

Industry partnerships help ensure that the skills taught in VTE programs are directly aligned with industry needs, reducing the skill gap and making graduates more attractive to employers (Anderson, 2019). Brown (2016), stated that practical experience gained through internships and

apprenticeships gives students a competitive edge in the job market because employers often prefer candidates with real-world experience. Green (2020), also noted that industry partnerships provide students with opportunities to build professional networks, which can be crucial for job placements and career advancement. Similarly, Lewis (2018), maintained that many industry partners offer job placements to interns and apprentices, leading to higher employment rates among VTE graduates. While industry partnerships offer numerous benefits, they also face challenges such as: funding constraints, mismatch expectations, regulatory barriers, limited industry engagement, alignment of goals and objectives, and cultural differences (Smith, 2018&Taylor, 2021). Some studies have proved that industry partnerships enable graduates to be employable after graduation.

In Brazil, The National Service for Industrial Training (SENAI) collaborates with various industries to offer vocational training programs tailored to the needs of the manufacturing and technology sectors. These collaborations with industries have led to higher employment rates among graduates, as the training provided is directly applicable to job roles in the industrial sector (Silva & Queiroz, 2019).

In India, according to Sharma and Jha (2020), the partnership between the Tata Institute of Social Sciences (TISS) and Tata Consultancy Services (TCS) focuses on creating job-ready graduates through practical training and curriculum development. The collaboration led to the development of programs that focus on soft skills, technical skills, and domain-specific knowledge, graduates from TISS have seen improved employment rates, with many securing positions at TCS and other leading companies in the IT sector. Furthermore, the curriculum is regularly updated to include latest industry trends and technologies, ensuring graduates are equipped with relevant skills. The authors noted that the TISS-TCS partnership has significantly improved the employability of graduates by aligning educational programs with industry requirements and providing practical training opportunities (Sharma & Jha, 2020).

In South Africa, the partnership between the Department of Higher Education and Training (DHET) and private sector companies has resulted in successful apprenticeship programs that significantly boost employment outcomes for VTE graduates (Muller, 2019).

In Nigeria, the partnership between the Federal University of Technology, Akure (FUTA) and Shell Nigeria to enhance education in engineering and geosciences through practical

training and research opportunities, allowed students to work on real-world problems, contributing to innovative solutions and enhancing their problem-solving skills. The FUTA-Shell partnership significantly boosted the employability of graduates by providing them with industry-relevant skills and practical experience, leading to high job placement rates (Mba, 2021).

More so, Lagos State Polytechnic's partnership with the Dangote Group focuses on technical and vocational education, particularly in the fields of manufacturing and engineering Olowu (2021), noted that the partnership included apprenticeship programs and has been instrumental in improving the employability of graduates by providing practical training and aligning the curriculum with industry needs. Additionally, the study looks at the problem of vocational and technical education (VTE) graduates in Lagos State not having the right skills for jobs in industries. It highlights issues like weak and inconsistent partnerships between institutions and industries, lack of proper planning, and no long-term strategies. Successful examples from Brazil, India, and South Africa show how strong industry partnerships can help, but similar efforts in Lagos are not well-developed or widespread.

Statement of problem

Vocational and technical education (VTE) serves as a cornerstone for preparing individuals for employment in various industries, particularly in Nigeria where the demand for skilled workers is high. However, despite the significant investments made in VTE programs, there remains a gap between the skills possessed by graduates and the needs of industries in Nigeria. Despite the growing emphasis on industry partnerships in VTE, there is a lack of comprehensive research on their impact on the employability of VTE graduates in Lagos, Nigeria.

The commercial hub of Nigeria, Lagos State, is a pertinent case study for examining the job prospects and difficulties faced by VTE graduates because the unemployment rate in Lagos State was 19.5% in 2022, with a significant portion being VTE graduates. Hence, the study intends to understand how industry partnerships can impact the employability of VTE graduates in Lagos State and also to draw insights from successful alliances in other regions, identify barriers hindering efficient cooperation in Lagos, and propose an improved framework.

On the other hand, this study will be beneficial to VTE Graduates by enhancing their employability and job opportunities. Educational Institutions – Improved curriculum alignment with

industry needs. Employers – Access to a skilled, job-ready workforce. Policymakers – Data to guide policies on education-industry collaboration. Non-governmental organizations – Organizations focused on workforce development and education reform can leverage findings to design effective intervention programs. Society – Economic growth and reduced unemployment. Researchers – A basis for further studies on education-industry partnerships.

Purpose of the study

The general purpose of the study is to find out the Impact of industry partnerships on the employability of vocational and technical education graduates in emerging economies: A case study of Lagos State, Nigeria. Specifically, the study sought to find out the:

1. types of industry partnerships that exist in emerging economies that can enhance the employability of VTE graduates in Nigeria.
2. how industry partnerships can influence the acquisition of practical skills and knowledge by VTE graduates to enhance employability.
3. perceptions of managers, lecturers, and students regarding the effectiveness of industry partnerships in improving VTE graduate employability.
4. challenges and barriers faced in establishing and maintaining industry partnerships in Nigeria.

Hypotheses

There is no significant difference between mean responses of managers in industries and lecturers and students of VTE on the effectiveness of industry partnerships in improving VTE graduate employability.

Methodology

The study adopted a descriptive survey research design. The area of the study is Lagos state and the reason is because Lagos State has the highest concentration of industries in Nigeria. Lagos is the commercial capital of Nigeria and serves as the country's economic hub, hosting a wide range of industries. The population of the study is 289 which consisted of 1 Manufacturing Industry - Dangote Group Located in Ikeja (7 - human resources personnel, 4 - training and development managers, 6 corporate social responsibility officers, and 9 - departmental managers), 1 Financial Institution - Leadway Assurance Company Limited Victoria

Island (3 - human resources managers and 5 - learning and development managers) and 1 Technology and Innovation - Andela, located in Yabacon Valley (5 - talent acquisition specialists, 6 - learning and development managers, 3 - engineering managers and 3 HR managers) and all public universities in Lagos state which offer VTE courses among which are 36 - VTE lecturers and 71- final year students in the University of Lagos (UNILAG) and 29 - VTE lecturers and 102 - final year students in Lagos state University (LASU). The total sampling technique was used because of the small population. The Questionnaire titled “The Impact of Industry Partnerships on the Employability of Vocational and Technical Education Graduates in Nigeria” (IIPEVGN) was developed and utilized for collecting data for the study. The instrument was divided into 2 sections based on the demographic section and another section for the specific purposes of the study. Each item in the questionnaire was assigned a four response options of Strongly Agree (SA =4), Agree (A =3), Disagree (D =2), Strongly Disagree (SD =1) and Very Effective (VE =4), Effective (E =3), Somewhat Effective (SE = 2), Not Effective (NE) respectively. The instrument was validated using three experts from the Department of Business Education, Faculty of Vocational and Technical Education, University of Nigeria Nsukka.

The researcher administered the 289 questionnaires to the respondents through five research assistants. Efforts were made to retrieve the instruments the same way it was distributed within one week and five days but 233 questionnaires were recovered and this yielded an 80.6 percent rate of return. Data collected were analyzed using mean and standard deviation and the hypothesis was tested under 0.05 degree of significance using Analysis of Variance (ANOVA). The study used the Statistical Package for Social Science (v20.0) for analysis. A mean of 2.50 was used as the cut-off point. For any item where the calculated p-value was greater than 0.05, then the hypothesis was accepted but if the p-value was less than 0.05, then the hypothesis was rejected.

Results

The results for this study are presented based on the research questions.

Research Question 1: What types of industry partnerships exist in emerging economies to enhance the employability of VTE graduates in Nigeria?

Table 1: Mean rating and standard deviation of the responses of managers, lecturers and students on the types of industry partnerships existing in emerging economies to enhance the employability of vte graduates in Nigeria

S/N	Items	$\bar{X}^1$	SD ¹	$\bar{X}^2$	SD ²	$\bar{X}^3$	SD ³	Remark
1	Internship programs	3.51	0.64	3.26	0.75	3.04	0.43	Agreed
2	Apprenticeship programs	3.02	0.59	3.42	0.77	3.47	0.14	Agreed
3	Industry-sponsored projects or competitions	3.16	0.84	3.05	0.78	2.88	0.46	Agreed
4	Work-based learning initiatives	3.19	0.76	3.47	0.51	2.92	0.53	Agreed
5	Curriculum development partnerships	3.14	0.51	3.16	0.69	2.59	0.44	Agreed
6	Joint research and development initiatives	2.93	0.40	3.56	0.73	3.06	0.63	Agreed
7	Talent Pipeline Initiatives	3.07	0.63	3.37	0.60	2.92	0.26	Agreed
8	Training and Professional Development	3.32	0.67	3.51	0.63	2.63	0.34	Agreed
9	Consulting and Advisory Services	3.42	0.51	3.50	0.60	3.55	0.72	Agreed

Key: $\bar{X}^1$ = Mean of the managers, $\bar{X}^2$ = Mean of the lecturers $\bar{X}^3$ = Mean of the students SD = Standard Deviation

The data presented in Table 1 revealed that managers, lecturers and students agreed that the above-mentioned items are types of industry partnerships existing in emerging economies to enhance the employability of VTE graduates in Nigeria. It has mean ranging from 2.59 – 3.55, indicating that their mean values were above the cut-off point of 2.50. This implies that items 1-9 were accepted. The standard deviation values ranged from

0.26 – 0.84 which indicates that the respondents were close to one another in their responses.

Research question 2: How do industry partnerships influence the acquisition of practical skills and knowledge by VTE graduates employability?

Table 2: Mean rating and standard deviation of the responses of managers, lecturers and students on how industry partnerships influence the acquisition of practical skills and knowledge by VTE graduates in Nigeria

S/N	Items	$\bar{X}^1$	SD ¹	$\bar{X}^2$	SD ²	$\bar{X}^3$	SD ³	Remark
10	Industry partnership activities enable students to gain technical and soft skills for enhancing their employability	3.42	0.69	3.64	0.48	3.20	0.55	Agreed
11	These activities provide effective practical skills to students	3.94	0.67	3.88	0.77	3.52	0.40	Agreed
12	The possession of technical and soft skills enable students in securing a job	3.86	0.39	3.25	0.75	3.95	0.21	Agreed
13	It can create employment opportunities for students	3.37	0.12	2.98	0.76	3.65	0.48	Agreed
14	Industry partnership contributes positively to involved industries and institutions by fostering collaboration and enriching the curriculum with real-world experiences.	3.54	0.32	3.04	0.19	3.58	0.82	Agreed

Key: $\bar{X}^1$ = Mean of the managers, $\bar{X}^2$ = Mean of the lecturers $\bar{X}^3$ = Mean of the students, SD = Standard Deviation

The data presented in Table 2 show that managers, lecturers and students agreed that the above-mentioned items are the ways through which industry partnerships influence the acquisition of practical skills and knowledge by VTE graduate's employability in Nigeria. It has mean ranging from 2.98 – 3.94, indicating that their mean values were above the cut-off point of 2.50. This implies that

items 10-14 were accepted. The standard deviation values ranged from 0.12 – 0.77 which indicates that the respondents were homogenous in their responses.

Research question 3: What are the perceptions of employers, lecturers, and graduates regarding the effectiveness of industry partnerships in improving graduate employability?

Table 3: Mean Rating and Standard Deviation of the Responses of Managers, Lecturers and Students on the Perceptions of Employers, Lecturers, and Graduates regarding the Effectiveness of Industry Partnerships in Improving Graduate Employability

S/N	Items	$\bar{X}^1$	SD^1	$\bar{X}^2$	SD^2	$\bar{X}^3$	SD^3	Remark
15	Internship programs significantly enhance VTE graduate employability by providing hands-on experience and industry exposure	3.73	0.61	3.52	0.26	3.55	0.71	Effective
16	Apprenticeship programs enhance VTE graduate employability by combining classroom learning with practical training under skilled mentors	3.84	0.33	3.57	0.42	3.62	0.67	Effective
17	Industry-sponsored projects or competitions effectively enhance VTE graduates' employability by allowing students to apply theoretical knowledge to real-world challenges and showcase their skills	3.66	0.47	3.72	0.54	3.51	0.51	Effective
18	Work-based learning initiatives contribute substantially to VTE graduate employability by offering opportunities for students to gain practical skills in authentic work environments	3.39	0.54	3.22	0.82	3.11	0.66	Effective
19	Curriculum development partnerships are highly effective in enhancing VTE graduate employability by ensuring that educational programs align with industry needs and trends	3.43	0.51	3.49	0.63	3.17	0.76	Effective
20	Joint research and development initiatives play a crucial role in enhancing VTE graduate employability by fostering innovation and collaboration between academia and industry	3.31	0.53	3.46	0.61	3.06	0.85	Effective
21	Talent pipeline initiatives significantly enhance VTE graduate employability by establishing pathways for students to transition smoothly into the workforce	3.33	0.65	3.37	1.12	3.09	0.49	Effective
22	Training and professional development programs are highly effective in enhancing VTE graduate employability by equipping students with relevant skills and knowledge for their chosen	2.91	0.41	2.73	0.54	2.52	0.75	Effective
23	Consulting and advisory services contribute substantially to VTE graduate employability by providing students with guidance, mentorship, and industry insights to excel in their careers.	3.09	0.78	3.12	0.37	3.53	0.61	Effective

Key: $\bar{X}^1$ = Mean of the managers, $\bar{X}^2$ = Mean of the lecturers $\bar{X}^3$ = Mean of the students SD = Standard Deviation

The data presented in Table 3 indicate that managers, lecturers and students agreed that the above-mentioned items are the perceptions of employers, lecturers, and graduates regarding the effectiveness of industry partnerships in improving graduate employability. It has mean ranging from 2.73 – 3.84, indicating that their mean values were above the cut-off point of 2.50. This implies that items 15-23 are effective in improving graduate

employability through industry partnerships. The standard deviation values ranged from 0.26 – 1.12 which indicates that the respondents were synonymous to each other in their responses.

Research Question 4: What are the challenges and barriers faced in establishing and maintaining industry partnerships in Nigeria?

Table 4: Mean rating and standard deviation of the responses of managers, lecturers and students on the challenges and barriers faced in establishing and maintaining industry partnerships in Nigeria

S/N	Items	$\bar{X}^1$	SD^1	$\bar{X}^2$	SD^2	$\bar{X}^3$	SD^3	Remark
24	Lack of awareness	3.89	0.51	3.51	0.31	3.92	0.27	Agreed
	Insufficient funding	3.72	0.70	3.21	0.47	3.06	0.24	Agreed

26	Limited industry engagement	3.98	0.86	3.09	0.33	3.44	0.19	Agreed
27	Mismatch expectation	3.35	0.15	2.59	0.25	3.16	0.38	Agreed
28	Regulatory barriers	3.36	0.24	3.15	0.65	2.54	0.42	Agreed
29	Alignment of goals and objectives	3.70	0.30	3.87	0.59	3.85	0.50	Agreed
30	Cultural differences	2.53	0.49	2.98	0.46	3.09	0.85	Agreed

Key: $\bar{X}1$ = Mean of the managers, $\bar{X}2$ = Mean of the lecturers $\bar{X}3$ = Mean of the students SD = Standard Deviation

The data presented in Table 4 revealed that managers, lecturers and students agreed that the above-mentioned items are the challenges and barriers faced in establishing and maintaining industry partnerships in Nigeria. It has mean ranging from 2.53 – 3.98, indicating that their mean values were above the cut-off point of 2.50. This implies that items 24-30 are the challenges and barriers faced in establishing and maintaining industry partnerships in Nigeria. The standard deviation values ranged from

0.15 – 0.86 which indicates that the respondents were similar to each other in their responses.

Hypothesis

There is no significant difference between mean responses of managers in industries and lecturers and students of VTE on the effectiveness of industry partnerships in improving VTE graduate employability.

Table 5: Analysis of variance on the difference among the mean responses of managers in industries and lecturers and students of vte on the effectiveness of industry partnerships in improving VTE graduate employability.

Sources of Variations	Sum Squares	df	Sig	Mean Square	F	P-value	Decision
Between Groups	1.782	2	0.05	.445	2.106	.087	NS
Within Groups	17.769	230		.212			
Total	19.551	232					

Table 5 shows that the calculated probability value (p-value) of 0.087 is greater than the alpha level of 0.05 with the degree of freedom of (2, 230) and $F = 2.106$. Based on this result, the null hypothesis which stated that there is no significant difference among the mean responses of managers in industries and lecturers and students of VTE on the effectiveness of industry partnerships in improving VTE graduate employability is uphold.

Discussion of findings

The findings in Table 1 revealed that internship programs, apprenticeship programs, industry-sponsored projects or competitions, work-based learning initiatives, curriculum development partnerships, joint research and development initiatives amongst others are types of industry partnerships existing in emerging economies to enhance the employability of VTE graduates in Nigeria. This finding is in line with Wilson (2015), Jones (2017), and Smith (2018) which stated that internship programs, apprenticeship programs, industry-sponsored projects or competitions, work-based learning initiatives, joint research and development initiatives, talent pipeline initiatives,

training and professional development, and consulting and advisory services are types of industry partnerships.

Also, findings in Table 2 revealed that industry partnerships influence the acquisition of practical skills and knowledge by VTE graduate's employability in Nigeria. This might be attributed to the fact that partnerships such as industry-sponsored projects ensure that graduates acquire the latest, most relevant skills that match market demands. Also, collaborations help students develop soft skills (problem-solving, teamwork), which are essential for workplace success and sought after by employers. These findings are consistent with earlier studies of Mba (2021), which stated that industry partnership has led to improved graduate employability by providing students with practical skills and real-world experience.

The findings in Table 3 indicates that types of industry partnership such as internship, apprenticeship research and development amongst others are effective in improving graduate employability through industry partnerships. This result might be because internships, apprenticeships, R&D initiatives and others provide practical

experience, equipping graduates with job-specific skills that enhance employability, keep students aligned with current industry trends, prepare them for relevant roles and also help develop essential soft skills for easy transition into professional environments. This corroborates with the findings of Silva & Queiroz (2019), which states that these alliances of educational institutions with industries have led to higher employment rates among graduates, as the training provided is directly applicable to job roles in the industrial sector.

Furthermore, the findings in Table 4 revealed that despite the effectiveness of industry partnerships, there are still challenges and barriers faced in establishing and maintaining industry partnerships in Nigeria. These findings might be because limited financial resources from both educational institutions and industry partners, a mismatch between academic goals and industry needs, complex regulations in Nigeria, differences in organizational culture and lack of interest or investment in partnerships can constrain the scope and sustainability of partnerships, create friction in partnership objectives and hinder smooth collaboration between academia and industries. This supports the view of Adams, (2017); Smith, (2018); & Taylor, (2021) which states that while industry partnerships offer numerous benefits, they also face challenges such as: funding constraints, mismatch in expectations, regulatory barriers, limited industry engagement, Alignment of goals and objectives and cultural differences.

Conclusion

Industry partnerships are essential to improving VTE graduates' employability in Nigeria because these collaborations play a vital role in bridging the gap between education and work by matching job placements, practical experience, and educational outcomes with industry demands. Moreso, challenges such as funding constraints, mismatch expectations, regulatory barriers, limited industry engagement, Alignment of goals and objectives and cultural differences should be addressed to better prepare VTE graduates for the workforce and contribute to economic growth.

Recommendations

1. VTE curriculum planners should update the curriculum to reflect current industry standards and include additional hands-on training because collaborations with industries can guarantee that the training offered satisfies the needs of the current market demands.
2. Educational institutions should work

together with industries to create diverse partnership opportunities, including internships, apprenticeships, work-based learning programs, collaborative projects, and industry-sponsored training initiatives, to provide VTE graduates with hands-on experience and exposure to real-world industry practices.

3. Educational institutions should source for resources from parents, angel investors and NGOs to support the implementation and sustainability of industry partnership initiatives, including investments in infrastructure, equipment, faculty development, and student support services.

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