

Facilitating School-to-Work Transitions of Vocational and Technical Education Graduates Through Work-Based Learning

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Abstract

The high unemployment rate among Vocational and Technical Education (VTE) graduates is disheartening, hence the study facilitates the School-to-work transition of VTE graduates through Work-Based Learning (WBL) as the rate of unemployment among VTE graduates are growing geometrically. Two research questions were utilized for this purpose. In the methodology, the type of design used was a descriptive survey. The study was conducted in higher institutions in Niger State, Nigeria; specifically, in the higher institutions offering VTE programmes. The population of the study was 455 which comprised 146 Lecturers and 309 Employers. A simple random sampling technique was used to sample 265 participants which comprised 102 Lecturers and 163 Employers were selected using the normal selection process. A questionnaire was used as the data-collecting tool. Three experienced researchers in VTE checked the data collecting tool for the appropriateness of the content. The index for the internal consistency of the data collecting tool based on parts is 0.901 for Part 1 and 0.862 for Part B. The index for the internal consistency of the data collecting tool for the total content was established as 0.912. The study found that WBL is beneficial and can enhance the school-to-work transition. It was recommended among others that, an enabling environment should be created between schools and industries, to enter into partnership for effective teaching and learning in institutions and Government through Industrial Training Fund and Tertiary Education Trust Fund (TETFund) should jointly build and furnish industrial training villages in each state of the federation where students of various VTE programmes can learn skills.

Key words: School-to-work, transitions, vocational and technical education, graduates, work-based learning

1. Introduction

Education is a key factor that enhances the development of humans as well as forms a pivot in the economic development of any nation. Education can be conceived as an avenue for the

acquisition of knowledge, skills as well as attitudes that modify people's behaviour for them to perform tasks efficiently as they live and solve problems in life in their living environment. It can be described as an organized procedure to enhance the value of humans in society which

helps people to experience rapid societal development and better living condition. It implies that education is a viable avenue utilized for creating values, moulding character and stimulating interest in creative thinking and other abilities needed by humans to function efficiently and solve problems in the society. Education brings social efficiency, which is conceived as the input process for the training and developing skills needed to build competent human resources in a nation (Albashiry, Voogt & Pieters, 2015).

In addition, to work towards social efficiency status, our educational system must concentrate more on realistic tasks and problem-solving activities that will lead to the production of better solutions and identify societal as well as organizational problems that hitherto impede workers' efficiency and general welfare which include poor health care facilities, deficiency in technical competencies, technological as well as deficiency in generic skills among others. In this vein, social mobility can be defined to mean an avenue to social opportunities that make life better and enhances economic growth. In this regard, educational institutions at all levels have the national obligation of equipping learners who have gone through school with the requisite knowledge as well as technological know-how which is a necessity for learners to advance in their careers or further their educational pursuit in tertiary institution as well as in occupational trade in personal businesses or industries.

In another view, education can be seen as a purpose-driven avenue for creating a conducive knowledge and skill acquisition arena for effective learning to take place; which concentrate on performance tasks that engage learners actively in the development of relevant competencies necessary to be inculcated in the learner's: intelligence, personality, noble

character, competencies (required by family, society, state as well as nation); self-control, the spiritual strength of religious as well as emotional intelligence skills needed to effectively interact with other people in the society. The process of acquiring and developing such skills can be referred to as VTE.

VTE is basic and a necessity towards industrialization as well as the economic development of any nation. The knowledge, technical know-how as well as competencies required for a country's social and economic emancipation are embedded in VTE. Kehinde and Adewuyi (2015) affirmed that VTE-trained individuals with knowledge as well as technical-how that will help him/her be self-employed by setting up a small/micro enterprise or by being engaged in paid jobs where the knowledge and technical know-how acquired to perform work effectively.

Moses, Diraso, Yaduma and Agbu (2017) in a research work, observed that, the preparatory procedures utilized in VTE which is practically oriented assists the learners in acquiring technical competencies for industrious, innovative, self-reliant as well as entrepreneurship abilities needed to take risks to start business and succeed in it with a bid to enhance empowerment in the society and among individuals. This is because the productivity, as well as the flexibility of manpower in an organization, is majorly based on the presence of competent manpower specifically artisans, craftsmen, technicians, as well as technologists. They said that those that employ workers in organizations are in search of graduates that possess relevant competencies, knowledge, and technical how as well as the capacity to be industrious and actively involved in problem identification as well as problem-solving for the betterment of society. To develop as well as maintain long-term economic development in

developing nations, it is imperative to utilize a combination of human resources (technological knowledge) together with social competencies.

In actual practice, VTE is planned to empower individuals who have to undergo training with the requisite survival competencies needed in the place of work as well as give technological support necessary for coping with the rapidly changing market demand globally via retraining opportunities that will lead to skill improvement. In developed nations, VTE is conceived as an avenue for enhancing sustainable occupational growth as well as healthy lifestyles via the acquisition of knowledge as well as practical competencies which can cope with the demands of a particular post in the workplace to translate into improved national development, economic growth as well as a healthy lifestyle of the populace. The more sustainable ideas and practices that the workforce undergo, the better the opportunities they will be exposed, to enhance their work performance on the job or place of work.

VTE can develop marketable skills in a man which exceed their function as a production tool. It has a close relationship between vocational-technical education and the world of work. Thus, the developments of VTE curricula in line with the world of work need to be analysed. The effective VTE should have a connection to the world of work; thus, it should be planned based on the work market prediction and demands. VTE is related to workplace practices, industrial practices, skilled-based learning as well as training play a vital function towards graduates to be able to make the necessary adjustment to cope with the changing demands of the employers of labour as well as working conditions (Adebisi & Santosa, 2022) This implies that VTE trainees in their preparatory stage should undergo series of real work tasks and problem-

solving activities that are similar to those in the actual occupations such as obtainable in Work-Based Learning (WBL).

WBL is an instructional procedure which integrates learning in the classroom with learning in the place of work and provides an avenue for improving learners' performance tasks as well as training students to join a productive workforce (Schröder, & Dehnbostel, 2021; Boone, 2019). WBL is a word commonly utilized to designate a category of a university programme that focuses on partnering with universities and industrial organizations to bring out a novel channel of knowledge and skill acquisition in the place of work. Research has established clearly that WBL approaches are relevant in the current technological advancement and emerging trends in technological growth globally, especially in meeting the technical manpower needs of the workplace (Schröder, & Dehnbostel, 2021; Drewery, Nevison & Pretti, 2016; Cappelli, 2014). Cappelli (2014) confirmed that WBL can immensely train and retrain learners on job-related tasks; to avail learners with the avenue to acquire habits and ethics of the workplace in a conducive environment for knowledge and skill acquisition. WBL also allows a person who is also "in the field;" to create mentorship associations or mentor-mentee relationships with employees of labour that could assist in "learning the ropes" of the job through engagement in real job tasks in the place of work as well as to build necessary job-based networks; and to create a good understanding of the basic necessity to enter as well as and progress in and occupation when employed, create a direction for career progress, as well as develop a mechanism for continuous progress in the chosen occupation (Roksa, Trolian, Pascarella, Kilgo, Blaich, & Wise, 2017).

WBL is basically different from institution-based learning in several approaches. In a normal

educational institution, learners are engaging majorly in specific learner-based tasks, while in a WBL environment; the learners are usually given job tasks with other workers in the same workplace to create an avenue for the learner or trainee to learn work skills from the workers as is acceptable in standard practice (Advance CTE, 2015). WBL creates an avenue for trainees to acquire technical knowledge and work skills from experienced workers. Furthermore, in an educational institution, learners are involved basically in mental tasks, while in a WBL environment; the trainees integrate non-concrete ideas with concrete ideas as they find the solution to identified problems in real life. Learners are guided to acquire competencies which are conceived to have general application, while in a WBL environment several of the learning tasks are centred on particular objectives, tools, equipment as well as methods (Drewery, Nevison & Pretti, 2016). They further said that in the educational institution, learners basically utilize few numbers of equipment, while in the place of work equipment has multiple functions and could be integrated. Leary (2012) viewed WBL as an approach to knowledge and skill acquisition that concentrated on university-level thinking concerning employment or job (unpaid or paid) to enhance the identification, acquisition as well as application of personal plus organized knowledge, technological know-how as well as competencies needed to achieve planned objectives of relevance to the trainee, their institution of learning as well as their employer.

Similarly, Atsumbe (2006) unveiled that when a functional partnership is established between the educational institution and industrial organization; then the appropriate category of competent manpower will turn out to cope with emerging technological-based difficulties faced

by current industrial organizations. A fundamental maxim of WBL according to the Alabama State Department of Education (2014) is that it could enhance more efficient knowledge and skill acquisition activities for trainees compared to studying in an educational institution. Due to the fact that WBL concentrates more on actual job tasks than pseudo tasks, it provides learners with an avenue to acquire knowledge as well as skills in actual work practices to foster better understanding between theory acquired from school and work competencies acquired from the workplace. The knowledge and work skills acquired through WBL stimulate creativity and improve learners' performance in actual job tasks and prepares them for a smooth transition from school to work. WBL in VTE provides important benefits, by increasing employability and smoother school-to-work transition (Yoto & Bella, 2019).

Hauge and Parton (2016) noted that WBL is beneficial in the development of the required work skills in VTE students and increases their chances of performing efficiently on the job. Effective WBL impact immensely towards eliminating the common problem of skill gap brought about by deficiencies in requisite competencies. It helps to control unemployment among youth, improves creative thinking, innovative practices, and business ideas as well as capable of enhancing peaceful co-existence by stimulating social inclusion in the society.

2. Statement of the Research Problem

In recent times, world economies are driven by industrialization that brings advancement in the utilization of innovative technologies as well as advancement in machines which are mostly automated to enhance accuracy in production tasks in industries as well as organizations and companies globally. The increasing technological

advancement in industrial activities brought about by automation to drive production tasks calls for the need to prepare trainees in VTE institutions to empower them with the 21st-century skills needed for effective performance to efficiently fit into the technical workforce to enable them to make a meaningful contribution to better social, environmental as well as the economic status of a people (Dokubo & Dokubo, 2014).

It is expected that over 75% of graduates of VTE are to work immediately after graduation but there is a low level of absorption of VTE graduates in the business world / industrial world (Yoto & Bella, 2019). Many reports identify that there is a great need to up-skill the workforce through a partnership with industry as the rate of unemployment among graduates of VTE is growing geometrically. The factors responsible among others are poor job skills and the gap between what schools teach and what industries demand. This implies that the competencies possessed by graduates are not appropriate and characterized by mismatch as regards the demands of the world of work, inadequate partnership with industries and related organisations, use of obsolete instructional facilities and many others (Saba, Raymond & Tsado, 2010).

In the current economy, there is a need of turning out well-skilled and competent VTE trainees that possess competencies relevant to the need of industrial organisations is a necessity. The teaching and learning should form habituation and work culture for students so that after graduation they will have reliable knowledge and skills to be able to self-reliance, set up business in their trade area, create employment, effectively function in industrial organization as well as related companies where their skills are in

demand and/or create jobs for themselves and others.

3. Research Questions

To provide direction for this research work, the following questions were raised and answered:

1. What benefits are WBL in facilitating school-to-work transition among VTE graduates?
2. What are the strategies for implementing WBL in VTE programmes?

4.0 Methodology

The research design utilized for this research work was a descriptive survey. The research was conducted in selected higher education schools in the Niger State of Nigeria, specifically in institutions offering VTE programmes. The population of the study is 455 which comprises 146 Lecturers and 309 Employers. A simple selection procedure with no bias was utilized to select the population elements of 265 which comprise 102 Lecturers and 163 Employers. A four-point scale-rated data-collecting tool was utilized as the data-collecting tool.

The data collecting tools undergo testing for appropriateness of content by selected experienced researchers who are three in number from the VTE field. The statistical tool called Cronbach's Alpha was utilized to test for the reliability of the content of the data collecting tool for appropriateness of content using computer enabled statistical package. The indexes for the internal consistency of the data collecting tool based on parts are 0.901 for Part A and 0.862 for Part B. The index for the internal consistency of the data collecting tool for the total content was established as 0.912. A physical look at the outcome of the internal consistency index compared with established standards showed that the developed data-collecting tool is

appropriate as well as suitable for collecting information for this research work. Out of 265 copies of the data collecting tool distributed during fieldwork to seek opinions, 232 copies were retrieved culminating in an 87.5% questionnaire rate of return.

To provide answers to the questions raised in the research, descriptive statistical tools (mean and standard deviation) was utilized. Real lower and upper limits numeration value range displayed in Table 1 was utilized in deciding on taking judgement on the questions raised for the research work. The nearness to the respondent's opinion towards the mean was ascertained utilizing the Standard Deviation (SD) statistical tool. In this approach, if an item is having SD of below 1.96 showing that the respondents were

close to each other in their opinion. Also, if an item has SD which is the same or more than 1.96; it indicates that the respondent's opinions were far apart from the mean.

Table 1: Range of Values for the Scale Utilized

S/N	Response Option of R.Q1 and 2	Point
	Strongly Agreed	3.50 – 4.00
2	Agreed	2.50 – 3.49
3	Disagreed	1.50 – 2.49
4	Strongly Disagreed	0.50 – 1.49

Key: R.Q = Research Question

5. Results

Table 2. Mean and S.D of respondents on the benefits of WBL in facilitating school-to-workplace transition among VTE graduates

S/N	ITEM	Mean	S.D	RMK
1	Connections between classroom and real-world learning	3.59	0.09	S.A
2	High student completion rates of the programme	3.35	0.01	A
3	Improves the connection between trainees and the work place	3.54	0.11	S.A
4	Development of critical skills	3.68	0.32	S.A
5	It promotes mutual understanding between business and education	3.75	0.65	S.A
6	It enhances acquisition of new emerging skills in line with with current practices in the workplace	3.86	0.12	S.A
7	Eliminates the necessity of buying exorbitant training tools and equipment for work	3.43	0.03	A
8	It is a viable avenue for developing soft competencies like team working and problem solving	3.49	0.87	A
9	Exposes trainees the importance of their occupational trade area to future employment opportunities	3.69	0.22	S.A
10	Makes students more interested in studying	3.62	0.16	S.A

As shown in Table 2, the lecturers and employers jointly agreed with items 2, 7 and 8 and strongly agreed with other items as benefits of WBL in facilitating school-to-work transition among VTE graduates. Similarly, the S.D of all 10 items in research question one spanned between 0.01 - 1.87, all these individual figures were below the established value of 1.96 which showed that the

mean values of those that responded to the instrument were not widely apart from one another and were closely related to each other in their opinion. The SD figures are an additional strength to the consistency of the mean values.

Table 3. Mean and S.D of respondents on the strategies for implementing work-based learning in VTE programmes

S/N	ITEM	Mean	S.D	RMK
1	Establishment strong school-industry partnership	3.78	0.01	S.A
2	Placement of students for industrial attachment	3.56	0.32	S.A
3	Cordial relationship between lecturers and industrial personnel.	3.71	0.19	S.A
4	Lecturers should have opportunity for industrial training	3.58	0.41	S.A
5	Engineers and technologies in industrial organizations should be assign lecturing appointment	3.55	0.21	S.A
6	Programme should be designed for regular industrial visit	3.59	0.45	S.A
7	Employers should be involved in designing of the programme	3.83	0.09	S.A
8	Establishment of industrial training village in each state	3.87	0.67	S.A
9	Students should participate in industrial attachment every academic session	3.57	0.08	S.A
10	Provide learners with frequent feedback on their progress.	3.62	0.18	S.A

Table 3 revealed that Lecturers and Employers strongly agreed with all items as avenues for implementing WBL in VTE courses. Also, the S.D of all the 10 items spanned between 0.01- 0.67, all of these figures were below the 1.96 standard benchmark which is an indication that the mean values of those that responded to the instrument were not too far away from one another and were also close to each other in the opinion which consequently is an additional strength to the internal consistency of the mean values.

6. Findings of the Study

The benefits of WBL in facilitating school-to-work transition among VTE graduates are enormous and include among others: the development of critical skills, providing an opportunity to connect students in the classroom to real-world learning, equipping students with current work skills needed in the industries that are in line with the newly emerging technological approach and technical know-how for doing work as well as stimulating students' interest in studying to learn new work skills needed for effective performance on the job.

The strategies for implementing WBL in the VTE programme among others include establishing strong school-industry partnerships, allowing students to participate in industrial attachment every academic session, and giving lecturers the opportunity for industrial training.

7. Discussion of Findings

On the benefits of WBL in facilitating school-to-work transition among VTE graduates, results from the findings in Table 2 indicated that the lecturers and employers agreed that WBL can develop students so that upon graduation they will be able to make an easy transition to work either through self-employment or take up employment. In support of the findings, Hauge and Parton (2016) noted that WBL is beneficial in the development of the required work skills in VTE students and increases their chances of performing efficiently on the job. WBL create avenues for acquiring relevant 21st-century work skills in instructional delivery in educational institutions to assist trainees (learners) to be groomed to function effectively in the place of work (Schröder, & Dehnbostel, 2021).

An established understanding of WBL is that it is capable of disseminating better and more efficient knowledge as well as competency-based opportunities for learners compared to normal learning in institutions which are usually theoretically based. Research evidence revealed that because WBL concentrates on actual job tasks in problem-solving, it avails learners the avenue real workplace expertise or problem-solving competencies tasks needed to harness both school-based knowledge as well as skills from place work thereby acquiring real-life innovative and emerging competencies needed for self-reliance and progress in employment (Alabama State Department of Education. 2014).

Several researchers emphasized that WBL can transit students from school to the workplace without much stress. Also, WBL makes available to trainees learning avenues that involve knowledge plus skills which ordinarily could not be acquired in normal educational institutions. Training opportunities in WBL are structured or planned to link theoretical knowledge acquired from the normal educational institution with competencies acquired from the trade area as skilled workmen, trainees or internship personnel. It is obvious that WBL enhances the acquisition of advanced technology; competencies, advanced technical knowledge, and the possibility of a more competent trained labour force which will enhance industrial development as well as the productivity of the workforce.

Properly administered WBL activities develop competency in educational institutions and it is of immense importance to the learners or trainees, mentor, institution, community as well as employer (Yoto & Bella, 2019). Findings also revealed that WBL is seen as a viable avenue for acquiring soft competencies like problem-solving as well as teamwork competencies. The finding agreed with the study conducted by Advance CTE (2015) that WBL develop competencies needed in

the workplace and advancement of such competencies needed in the workplace is crucial to the handling and coordination of industrial personnel in tutelage and retraining programme. WBL has been established to stimulate as well as enhance learners in the acquisition of advanced technological competencies at their place of work. Technological competencies, as well as technical skills, could encompass: developing analytical competency; perfecting conversance with standard concepts and principles underlying procedures and, as demanded by several organizations' basic computer literacy skills (Yoto & Bella, 2019). Technological competencies as well as technical abilities in performing job tasks involve displaying efficiency in performing practical job tasks as well as acquiring knowledge on standard approaches to learning and skill acquisition.

On the strategies for implementing WBL in the VTE programme, results from Table 3 revealed that for effective implementation of WBL it was agreed that there should be a strong partnership between schools and industries. To buttress this point of view, Atsumbe (2006) in a study on school-industry partnership revealed that when a functional collaboration exists between the educational institution and industrial organization, then the appropriate quality of competent technical manpower would be trained to cope with the industrial challenges faced by industries in the 21st century. These findings on the strategies for implementing WBL in the VTE programme were buttressed by Raymond and Abutu (2016) who in a study on WBL, found out that there is a need for reorganizing the instructional activities and tasks as well as teaching approaches in this skilled-based tutoring avenue to stimulate trainee's motivation towards acquiring relevant competencies empowering them with relevant tasks through WBL. The authors also found out that creating instructional activities and experiences for WBL as well as reviving VTE instructorship preparatory learning

experiences for the efficient administration of WBL via more suitable instructional approaches is a good strategy for implementing WBL in the VTE programme. Researchers further emphasized that if a strong partnership between vocational-technical education and industries is formed, the educational institution will combine efforts in combating similar challenges, technological issues, problems, weaknesses as well as strengths and this will go a long way in bridging the wide existing gap between theory and practice thereby enhancing the production of quality VTE graduates through WBL.

8. Conclusion

To reduce the challenges of unemployment facing the graduates of VTE as a result of a mismatch in skills development. WBL has been proven to be reliable for school-to-work transition, as it provides an opportunity, to connect students in the classroom to real-world learning, and develops 21st-century competencies needed for effective performance in the place of work. WBL has also been established to be a potent avenue to acquire and advance special workplace competencies like problem-solving as well as teamwork skills. To implement WBL in VTE programmes all hands must be on the desk by establishing strong industry partnerships, students should participate in industrial attachment every academic session and lecturers should be given the opportunity for industrial training. When these are achieved there will be a smooth transformation as well as the progressive movement of trainees upon completion of the programme into the world of work consequently issue of inadequate jobs confronting VTE graduates will be drastically reduced.

9. Recommendations to Enhance WBL

From the results of this research work, certain suggestions are outlined below:

1. An enabling environment should be created between schools and industries, to enter into partnerships for effective teaching and learning in schools.
2. The government through Industrial Training Fund and TETFund should jointly build and furnish an industrial training village in each state of the federation where students of various VTE programmes can learn skills.
3. Since the achievement of standard instructional delivery in schools depends upon the competencies and efficiency of instructors as well as WBL trainers, focuses should be geared towards viable avenues for acquiring relevant competencies as well as periodic retraining for those instructors working in schools plus industrial trainers in the company or industries.
4. Students should be allowed to participate in industrial attachment every academic session instead of once. The programme should be designed in such a way that in each session students spend at least two months in industrial attachment.
5. The students on industrial attachment should be properly placed in the appropriate industries where relevant current work skills can be learnt and not in organizations of convenience for students where current work skills cannot be learnt.

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