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Complimenting Shortfalls in Technological Skills Acquisition in Business Education Curriculum Through Industrial Training: The Case of University of Nigeria, Nsukka And Abubakar Tafawa Balewa University, Bauchi

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Abstract
The paper examined ways of complimenting the shortfalls in technological skills acquisition in business education curriculum through industrial training for university students in Nigeria. To achieve the purpose of this study, two research questions were formulated as guide for the study. Literature was reviewed in line with the variables under study. Survey research design was adopted. The population for the study was 165, made up of 22 business educators and 143, 500 level business education students, no sample was drawn as the population size was manageable within the researchers' time and logistic. A 21-item questionnaire was used for data collection. The data obtained from the field was analyzed using mean and standard deviation statistical tool. All items that had mean ratings of 2.50 and above were considered useful, while those with mean ratings of below 2.50 were considered not useful. The result in Table 1 shows that the respondents strongly agree to all items listed with a mean rating of 3.51, as ways of complimenting the shortfalls in technological skills acquisition in the business education curriculum through industrial training for university students in Nigeria. Based on the findings, conclusion was made and it was recommended amongst others that a review of the current curriculum was necessary to capture the demands of the modern day.

Keywords: Business education, curriculum, industrial training/collaboration, technological skills.

Introduction

The revolution going on in the modern office as well as the business world today is technology. Technology is bringing a complete shift in the way people communicate, live and educate. Business transactions and office routine work which were hitherto done manually are now computerize, with the click of a single button, the work or assignment is done. The computer, internet, world-wide-web (www), electronic and digital calculator, CD-ROM, television, teleconferencing, facsimile, global system for mobile communication (GSM) and the social media services are coming as a force for change in the teaching and learning activities (Jimoh, 2015). So many tools and equipment have been introduced to assist business educators and their students to perform their assigned duties efficiently and effectively. Titiloye (2014) posit that the world is changing for good and business education teachers, students and stakeholders must not be left out in the dark. Technology has become the key driver of sustainable national development globally as well as the survivability and, competitiveness of the individual within the contemporary society. On this note it has become imperative that the training kit, program of training business educators which is the curriculum, be aggressively technologically incline to a large extent to equip its products with relevant skills needed to fit into and to deal with challenges of a dynamic society.

Business educators are expected to be proficient in the knowledge and skills of using these technological gadgets particularly the computer which is one main channel or gadget through which most tasks are achieved. Teaching and learning activities such as research work, notes compilation, setting examination questions, result computation, giving assignments/passing instructions, communicating with colleagues, seeking for information and of course, for leisure, chatting with friends through the various social media, are achieved through the use of the computer. These can only be achieved through a curriculum that is enriched, endowed with skills, knowledge, competences and values of the social transformation to bring about the right learning outcomes which are the expectation of the society.

Regrettably, most tertiary institutions (universities inclusive) do not have adequate facilities/equipment, machines and technologies such as sufficient and functional computers connected with internet service, printers, photocopiers, shredders, scanners, laboratories and the likes. Students from such institutions cannot effectively operate office machines and equipment (Amahi & Ogben, 2014). Products of those institutions cannot provide qualitative functions to meet the challenges of the business world, have positive changes in knowledge, skills and increase efficiently and effectively in the production of high quality services due to inadequate curriculum content. Lynch in Amahi & Ogben (2014) corroborated the above statement that modern information technology is rarely found in schools and in their curriculum and so not much impartation of the knowledge that will enable graduates of our universities function effectively in the world of work.

Inadequacies of the business education curriculum of our universities in the area of technological skills cannot be over emphasize against one of the objectives of business

education enshrine in its reviewed curricula (2011) which states 'to provide a course of instruction and all necessary facilities and exposure for the pursuit and acquisition of learning and knowledge for services to humanity'. The Mandate of Business Education in Nigeria, (2017) states that the 'vocational objective of business education relates specifically to the preparation of students for initial employment, to upgrading existing skills, and to retraining in new and/or related business and office occupations.' One basic skill in business education today is computer skills and its associated peripherals which according to Amahi & Ogben (2014) its use have been on the increase with the use of internet as a vital tool in the gathering and processing of information for research purpose, for business transaction and for personal correspondences. It becomes imperative to seek for alternative means of complimenting that shortfall through collaborative industrial training amongst other options that may be. Although, business education students are exposed to Students' Industrial Work Experience Scheme (SIWES) and Teaching Practice (TP) but the experiences students acquire from those schemes spelt out in the curriculum, are not adequate to their training needs (Uchenu, Okeke-Okonkwo & Ifi, 2019). The Students' Industrial Work Experience Scheme was expected to bridge the gaps between theory and practice, ensure smooth transition of students to industry and the world of work, unfortunately, the scheme has been less impactful due to inadequate student placement, lack of close and effective supervision and rejection of student-trainees in some cases by private organisations. The aforementioned challenges raise the concern of the researchers on how the objectives of the scheme have become ineffective and consequently not attainable and therefore the need for new ways that are better and more practicable to be sort for, through drastic curriculum review and implementation, active partnerships, field trips and others linking industry and our universities. This is the crux of this paper.

Curriculum implementation and Technological Skills Acquisition in Business Education

The term curriculum is derived from a Latin word 'currus' meaning "race tract" or "race course" through which an athlete must run in order to reach the desired destination so as to win a trophy. Shaibu, Oshiogwe & Mbaegbu (2014) saw curriculum as a group of planned experiences in proper sequence of topics designed to prepare individuals for efficient service in a specific vocation. 'Running a course' is done with an aim which is to reach a goal, that depicts setting a particular programme that learners have to pass through to gain a certain level of knowledge in any field of endeavour. Tanner and Tanner (1975) saw curriculum as the planned and guided learning experiences and intended learning outcomes, formulated through the systemic reconstruction of knowledge under the auspices of the school for the learner's continuous and willful growth in personal social competence.

Curriculum as a concept refers to both an individual and collective learning experiences. In their view Moronkola, Akinsola and Abe in Shaibu, et al (2014) saw curriculum as a structured series of intended learning experiences that embrace purpose, experiences provided and directed by educational institutions to achieve predetermined

objective. It is seen as the reconstruction of knowledge and experiences, systematically developed with the guidance of the school or relevant agencies, which will enhance the learners and the society's well-being. In this work, curriculum defined as a planned and guided learning experience and intended learning outcomes formulated through the systematic reconstruction of knowledge and experience under the settings of schools for the learner's continuous and willful growth in personal and social competence, this is done through curriculum planning. Curriculum planning is the process of gathering, sorting, selecting, balancing and synthesizing relevant information from many sources in order to design those experiences that will assist the learners in attaining the goals of the curriculum.

It is choice, tasks and goal oriented. Uchenu et al (2019) posit that curriculum implementation is a valid action (through participation, resources provision or creating enabling environment) in the execution of planned programme of translating theory into practices, with a view of yielding expected result. The reverse is the case as the quality of graduates from the universities and indeed business education fall greatly below societal expectations due to inadequacies in the operating curriculum which this paper intends to discuss possible way-out through collaboration between institutions and industries.

Industrial Training for Enhanced Technological Skills

Industries and universities collaboration can enhance relationship and skills that will help to secure placement for students' internship programmes as well as creating avenue for students to discover the modern equipment and facilities use in the industries, and the relevant technological skills required. The Students Industrial Work Experience Scheme (SIWES) has been found to be ineffective as earlier stated (Uchenu et al, 2019). Otum & Akerele (2019) posit that poor supervision of students during internship training by industrial base and institutional supervisors open opportunities for students to influence the report on their performance.

However, if properly facilitated, SIWES is one good strategy for sustainable skills development among students but it has been abused over time. It is a school-to-work programme that should ensure the transferability of technological skills, improve work experience, provide practical and industrial orientation that leads to better career choice for the students. Igboke, Dalyop-Jah, Garba & Okafor (2018) observed that business education graduates are plagued by the inability to get jobs in corporate industries in the country while the industries mostly complain of inadequate skills required especially in the current cutting edge technology, having low practical know-how and lack of confidence. That has been attributed to the quality of training received in schools which is devoid of skills necessary to meet the demands of industries.

One greatest challenge facing education in Nigeria is financial resource, and business education being a part of educational sector, which is capital intensive in nature, is sorely affected since every item within the business education instructional environment is subjected to adequate optimization of the lean financial resources. Therefore, difficulty in employing well trained personnel, develop or renew its curriculum, offer a wide range of modern infrastructure and facilities like well-built laboratory equipment with adequate number of computers and its accessories, high capacity power plants, workshops, studios, libraries and all necessary facilities that will enhance teaching and learning (Okoye & Udegbunam, 2019). The current practice according to Wanjaiakerre (2019) are archaic, passive, teacher centered and textbook driven, and must be abandoned to shift to new paradigms which emphasize critical thinking, flexibility, communication, creativity, technology and innovation. The new practice as it has been established is a quest for technological literacy, critical thinking and the likes in order to produce graduates with practical skills and awareness of global issues, have a disposition and capacity to be a lifelong learner. This entails embracing new technology and a positive attitude towards learning which can only be achieved by looking outwards for help. In order to provide the necessary technical support for education in Nigeria, there is need for public private partnership.

Public Private Partnership (PPP) is a contractual arrangement which is formed between public and private sector companies in the development, financing, ownership and operation of a public facility or service. In this partnership, resources and responsibilities are put together and shared so that partners' efforts are complemented. Okoye & Okwelle in Emeasoba (2019) explained that PPP is a generic term for the relationships formed between the private sector and public bodies often with the aim of introducing private sector resources and or expertise in order to help provide and deliver public sector assets and services. Aina & Akintunde in Emeasoba (2019) posited that Public Private Partnership in education is a relationship where the public (government) and private resources are voluntarily put together mainly for achieving educational goals. Noting that since government alone cannot bear the burden of functional education in Nigeria, there is the need for private sectors to be more actively involved. Individuals and non-governmental agencies have a vital role to play in PPP in education to ensure quality and functional education. Shouldering the burden of education alone by the government is no longer visible and leads to waste of the little available resources, time and energies but where there is collaboration between the two, more is achieved through level or degree of knowledge acquired and a ready market for the products of these educational institutions. In this partnership where the government and industries (private sector) voluntarily put resources together, the aim is to execute or jointly carry out projects with the aim of sharing the profits and risk together. This is another form of help that can be encouraged to boost the teaching and learning processes of business education especially in the area of providing technological equipment and gadgets as well as training teachers that are handling relevant courses in the use of these technologies.

Collaboration between industry and government has since been adopted in more developed countries as posit by Waters in Ikelegbe (2020) that the collaboration between schools and industries makes provision for efficient skill building by students. It has assisted greatly in the supply of educational services to areas that are dispersed locations which solved some problems of barriers for students in remote locations and has helped the education sector to keep pace with knowledge innovation, new work practices and products with innovative educational solutions. Ogudo & Crossdale-Ovwido (2021) maintained that it allows convergence of partners' perspectives which can result in innovative education ideas which are directly relevant to their respective workforces, hence co-produced educational programmes which create genuine and direct value for both the school (students as ultimate beneficiaries) and for the industry. Of utmost relevance is, it pave way for access to resources that are beyond the financial capacity of schools, such as equipment that is of industry standard, which is in contrast to simple options available in the school laboratories and workshops as well as personnel who are experts in their respective fields. When all these are envisioned and are appropriately captured in an industry/school based curriculum, knowledge transfer and workplace readiness of potential employees will be with ease, since it is a platform for recruitment of future employees. This will be a win-win collaboration for both the institution and the industry. Another point of note is, the industry can influence school curriculum with the aim of better aligning of future employees with the skill needs of industries. This can also be regarded as institute and industry collaboration.

Statement of the problem

The inability of government to provide sufficient facilities that can enable effective and efficient teaching and learning is glaring and getting worse by the day, (Agbo, Ugwoke & Edeh 2019, Oyinloye & Asonibare, 2020). Consequently, the shortfall in the area of modern technology skill subjects in the university curriculum producing graduates without necessary skills and capacity in the use of the computer its accessories as well as other necessary gadgets that are used in the electronic office today becomes quite disturbing, (Akpomi & Ikpesu, 2021). The objectives of the business education programme mentioned above may be good on paper but not achievable or realistic in practice. The situation is that of insufficient functional computers, printers, photocopiers, scanners, epileptic power supply, none functional standby power generators, inadequate provision of accessories and necessarily consumables required for effective teaching and learning activities that will enable the production of skilled oriented graduates able to fit in and meet the objectives listed above. It becomes necessary to look outside the box for means of meeting these needs. The researcher identifies effective and aggressive industrial training/collaboration which should be entered into in order to improve the quality of vocational training given to the university student to be readily absorbable into the world of work. Whatever form it will take, should be geared towards the provision of practical employability skills necessary for today's industry. This study therefore examined

possible ways of complimenting shortfalls in technological skills acquisition in business education through industrial training for university students in Nigeria.

Research Questions The following research questions guided the study:

Research Questions

1. What are the possible ways industries can complement the shortfalls in technological skills acquisition of the Business Education Students in University of Nigeria, Nsukka and Abubakar Tafawa University, Bauchi?
2. What roles can Business Education Departments in University of Nigeria, Nsukka and Abubakar Tafawa University, Bauchi sustain the collaboration with the industries

Methodology

The study adopted survey research design because it relied on the use of questionnaire to elicit the opinions of respondents. The study was carried out in University of Nigeria, Nsukka and Federal College of Education (Technical), Gombe, affiliated to Abubakar Tafawa Balewa university, Bauchi. The population for the study was 165 comprising 22 staff and 143 500 level students who just completed their 6 (six) months students' industrial work experience scheme. The entire population was studied since it was a manageable size. Data was generated through the use of questionnaire structured on a four-point rating scale of Strongly Agree (SA), Agree (A), Disagree (DA) and Strongly Disagree (SD). 165 copies of questionnaire were administered by the researchers and two research assistants, 148 were retrieved and found valid for analysis. The data obtained were analyzed using mean and standard deviation t-test statistical tool was used to test the hypothesis at 0.05 level of significance. For every item, mean value of 2.50 and above is regarded" agreed" while mean value less than below 2.50 is regarded "disagreed".

Results

Research Questions1: What are the possible ways industries can complement the shortfalls in technological skills acquisition of the Business Education Students in University of Nigeria, Nsukka and Abubakar Tafawa University, Bauchi?

Table 1: Mean ratings of respondents on possible ways industries can complement the shortfalls in technological skills acquisition of the business education students in University of Nigeria, Nsukka and Abubakar Tafawa University, Bauchi in Nigerian.

S/N	Ways of complimenting shortfalls	X	Remarks
1.	Deliberate inclusion of Industrial Training period in industry calendar	3.20	SA
2.	Assigning staff to liaise with universities on students' placement	3,64	SA
3.	Determining areas of technological skills needs for adequate training	3.58	SA
4.	Ensure strict supervision of students on IT on use of industry gadgets	3.40	SA
5.	Assist universities with computers, printers and other peripheries	3.67	SA
6.	Cooperative work and study arrangements	3.33	SA
7.	Collaboration in research projects by providing funds	3.37	SA
8.	Granting students access to use industrial equipment	3.65	SA
9.	Industries granting scholarships to Bus. educ. Students	3.29	SA
10.	Professional guidance and counselling to students from Industries	3.68	SA
11.	Engaging successful entrepreneurs for sessions with Bus. Students	3.56	SA
12.	Overhaul of business education curriculum to include the above	3.35	SA
	Grand mean	**3.51**	**SA**

Data in Table 1 showed that all items listed were strongly agreed upon with a mean above 2.50. This indicates that the respondents strongly agreed on universities and industry collaboration or partnership to assist in the various areas of training to compliment the shortfalls in technological skills acquisition by business education students. This must be captured in the business education curriculum.

Research Questions 2: What roles can Business Education Departments in University of Nigeria, Nsukka and Abubakar Tafawa University, Bauchi sustain the collaboration with the industries?

Table 2: Mean ratings of respondents on roles can Business Education Departments in University of Nigeria, Nsukka and Abubakar Tafawa University, Bauchi sustain the collaboration with the industries

S/N	Roles of universities in sustaining partnership	$\bar{X}$	Remarks
1.	Call for curriculum upgrade	2.63	SA
2.	Invite experts, manufacturers and industrialist to the conference	3.64	SA
3.	Signing of memorandum of understanding with industry	2.60	SA
4.	Organizing conferences/public lectures for awareness	3.53	SA
5.	Making land available at a secured location in the department	3.05	SA
6.	Ensure staff development in appropriate disciplines	2.60	SA
7.	Ensure appropriate maintenance plan	3.00	SA
8.	Adhere strictly to curriculum specification of 60/40 practical/theory	2.55	SA
9.	Do curriculum upgrade from time to time as technologies	3.20	SA
	Grand mean	**2.98**	**SA**

Data in Table 2 revealed that the respondents strongly agree on all items as roles required of universities in maintaining and sustaining the partnership with industries in a bid to compliment the shortfalls in the technological skills acquisition by business education students.

Discussion of Findings

Complementing shortfalls by industries for the acquisition of technological skills by business education students in the universities.

The findings of the study showed that the industries have a great role to play in assisting in the development of the business education students. This can be seen in the responses obtained. This result is in line with the position of Akele & Chukwu (2020) who states that industrial training when properly harnessed, can go a long way in enhancing the acquisition of technological skills by business education students. Increase and conscious moves must be taken towards this line if our students will meet the needs of the employers on graduation.

Every university programme has to follow the approved curriculum, therefore, every step to be taken must be captured in the working curriculum. The result revealed that staff should be assigned to liaise with universities on students' placement for industrial training noting areas of needs, strict supervision of students when using every equipment. Industries can assist universities by supplying computers and other office equipment and offer to train the lecturers and if possibly the students. Furthermore, industries can assist by sponsoring the scholarly research work of both lecturers and students, provide professional and practical

guidance and counselling to then universities. This can be achievement when it is in line with the provisions of the curriculum. Muoghalu & Omorodion (2020) posit that strict adherence to the working curriculum has restricted the diversification of activities of some programmes in our institutions of learning, therefore the curriculum should be reviewed to accommodate the trends and needs of time.

Roles of Business Education Departments in University of Nigeria, Nsukka and Abubakar Tafawa University, Bauchi in sustaining the collaboration with the industries

The result on Table 2 has a grand mean of 2.98 which is strongly agree. This agrees with the position of Agbo, et al (2019) who suggest the reform of the business education curriculum to enable its students acquire the laudable modern skills employers expect of them. The table suggest among others, that the universities call for curriculum upgrade conferences, workshops and seminars where experts, captains of industries, entrepreneurs, students, lecturers, external examiners, professional bodies, policy makers are engaged in discussions to bring out their needs and expectations of its employees. Tertiary institutions in Nigeria should provide needed land, and necessary logistics for construction of structures, ensure adequate maintenance plans, staff development and to ensure that the reformed curriculum is strictly followed by observing the 60/40 requirement for practical and theory. The study also agrees that curriculum review should be carried out from time to time to meet up with the speed of technology advancement.

Conclusion

Based on the findings it is concluded that the universities cannot provide every basic gadget needed to train and equip business education student with basic technological skills therefore, the need to seek for external means which this study identify industrial training as a way out. There are various ways of industrial training and intervention which are enumerated on the tables above, which should be captured in the business education curriculum, the working document for every university programme, business education inclusive. The study conclude that a review is necessary in order to captured the necessary suggestions and observations made in the curriculum, the study also made it clear that business education departments have roles to play in order to maintain and sustain terms of the partnership.

Recommendations

The following recommendations were made by the researcher based on the findings of the study:

1. In order to put hope and to restore the dignity of our students in the labour market, it has become pertinent to do a review of the present working documents for the business education programme, which is the curriculum, to reflect the current needs of the industries in the area of technological skills development.

2. Participants in the review should include the industrialist, entrepreneurs, information technology experts, students, staff, external examiners, employers, policy makers and many others who can contribute meaningfully to enrich the content of the curriculum in the area of technological skill development.
3. The outcome of this review should be strictly adhered to and implemented without compromise whatsoever.

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