

CONCEPTUAL FRAMEWORK OF SERVICE LEARNING IN TECHNICAL AND  
VOCATIONAL EDUCATION AT THE NIGERIAN TERTIARY EDUCATION

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Dedicated to my Mother (Hajiya Aishatu Puma) and to my late father (Dawaki Ali Birma Deba), May Allah (SWT) forgive all his sins and May He makes Jannatul Firdaus to be His final domicile (Ameen) and all my family members, teachers right from childhood up to now and friends

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## **ABSTRACT**

Current experiential learning approach in the Nigerian Technical and Vocational education (TVE) has been criticized for not meeting the desired challenges. The TVE departments give less emphasis to service learning due to lack of conceptual framework that can guide its implementation. Hence, this research aimed to develop a conceptual framework of service learning in TVE for Nigerian tertiary education. The research was designed to determine the aspects and their respective areas for the development of a conceptual framework for effective service learning in TVE. Mixed methods sequential explanatory research design was employed for this research. Two hundred and sixty seven (267) respondents comprised of 206 lecturers, 45 heads of department and 16 faculty deans and deputy deans were chosen using stratified random sampling technique from eight TVE departments of 15 tertiary education institutions in the North Eastern Sub-Region of Nigeria. Six service learning experts in TVE were interviewed. A researcher-made structured questionnaire consisting of 67 items and interview protocol on the six major aspects of service learning were used as instruments for the quantitative and qualitative data collection respectively. The instruments were validated by three experts and the reliability of the questionnaire was established through a pilot study. Stepwise linear regression analysis, structural equation modeling (SEM) and confirmatory factor analysis (CFA) were used to analyse the quantitative research questions whereas content analysis was used to analyse the qualitative research question. The findings revealed a conceptual framework of service learning for TVE in the Nigerian tertiary education which include course learning objective, faculty community involvements, students' learning outcomes, assessment/reflection procedures, community service needs and pedagogical support services which covers a total of sixty seven areas of service learning in TVE. In conclusion, the research recommended for the implementation of the conceptual framework in TVE at the tertiary institutions in Nigeria.

## ABSTRAK

Pendekatan pembelajaran berasaskan pengalaman dalam Pendidikan Teknik dan Vokasional (PTV) di Nigeria telah dikritik kerana tidak memenuhi kehendak semasa. Jabatan PTV tidak menekankan pembelajaran servis mengakibatkan kurangnya kerangka konsep yang dapat dijadikan panduan dalam perlaksanaannya. Kajian ini bertujuan untuk membangunkan satu kerangka konsep pembelajaran servis untuk institusi pengajian tinggi di Nigeria. Kajian ini telah direkabentuk untuk menentukan aspek-aspek dan bidang-bidang yang berkaitan dalam membangunkan kerangka konsep pembelajaran servis yang berkesan dalam PTV. Rekabentuk gabungan jenis *sequential explanatory* telah digunakan dalam kajian ini. Dua ratus enam puluh tujuh (267) responden yang terdiri daripada 206 pensyarah, 45 ketua jabatan dan 16 dekan dan timbalan dekan fakulti dari 8 jabatan pengajian tinggi PTV iaitu dari 15 institusi pengajian tinggi di Timur Laut Nigeria telah dipilih sebagai sampel menggunakan teknik rawak strata. Enam pakar pembelajaran servis dalam PTV telah ditemubual. Penyelidik telah membina soal selidik berstruktur yang terdiri daripada 67 item dan protokol temubual berkenaan enam aspek utama pembelajaran servis dan telah digunakan sebagai instrumen dalam mengumpul data-data kuantitatif dan kualitatif. Instrumen ini telah disahkan oleh tiga orang pakar, manakala kebolehpercayaan soal selidik telah dibuktikan melalui kajian rintis. Analisis regresi *linear stepwise*, model persamaan berstruktur (SEM) dan *confirmatory factor analysis* (CFA) telah digunakan untuk menganalisis persoalan kajian kuantitatif manakala analisis kandungan telah digunakan untuk menganalisis persoalan kajian kualitatif. Kajian berjaya menghasilkan kerangka konsep pembelajaran servis PTV untuk pendidikan tinggi Nigeria yang mengandungi objektif kursus, keterlibatan fakulti dalam komuniti, hasil pembelajaran pelajar, prosedur penilaian/refleksi, keperluan perkhidmatan komuniti dan bantuan perkhidmatan pedagogi yang merangkumi enam puluh tujuh bidang pembelajaran servis dalam PTV. Sebagai rumusan, kajian ini mencadangkan agar kerangka konsep ini dapat digunapakai di institusi-institusi pengajian tinggi PTV di Nigeria.

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## LIST OF ABBREVIATIONS

TVE	-	Technical and Vocational Education
SL	-	Service Learning
TVEP	-	Technical and Vocational Education Program
FRN	-	Federal Republic of Nigeria
NPE	-	National Policy on Education
SIWES	-	Student Industrial Work Scheme
IT	-	Industrial Training
NUC	-	National University Commission
NBTE	-	National Board for Technical Education
NCCE	-	National Commission for Colleges of Education
SPSS	-	Statistical Package for Social science
AMOS	-	Analysis of Moment of Structures
SEM	-	Structural Equation Modeling
CFA	-	Confirmatory Factor Analysis
NYSC	-	National Youth Service Corps

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Dedicated to my Mother (Hajiya Aishatu Puma) and to my late father (Dawaki Ali Birma Deba), May Allah (SWT) forgive all his sins and May He makes Jannatul Firdaus to be His final domicile (Ameen) and all my family members, teachers right from childhood up to now and friends

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## **ABSTRACT**

Current experiential learning approach in the Nigerian Technical and Vocational education (TVE) has been criticized for not meeting the desired challenges. The TVE departments give less emphasis to service learning due to lack of conceptual framework that can guide its implementation. Hence, this research aimed to develop a conceptual framework of service learning in TVE for Nigerian tertiary education. The research was designed to determine the aspects and their respective areas for the development of a conceptual framework for effective service learning in TVE. Mixed methods sequential explanatory research design was employed for this research. Two hundred and sixty seven (267) respondents comprised of 206 lecturers, 45 heads of department and 16 faculty deans and deputy deans were chosen using stratified random sampling technique from eight TVE departments of 15 tertiary education institutions in the North Eastern Sub-Region of Nigeria. Six service learning experts in TVE were interviewed. A researcher-made structured questionnaire consisting of 67 items and interview protocol on the six major aspects of service learning were used as instruments for the quantitative and qualitative data collection respectively. The instruments were validated by three experts and the reliability of the questionnaire was established through a pilot study. Stepwise linear regression analysis, structural equation modeling (SEM) and confirmatory factor analysis (CFA) were used to analyse the quantitative research questions whereas content analysis was used to analyse the qualitative research question. The findings revealed a conceptual framework of service learning for TVE in the Nigerian tertiary education which include course learning objective, faculty community involvements, students' learning outcomes, assessment/reflection procedures, community service needs and pedagogical support services which covers a total of sixty seven areas of service learning in TVE. In conclusion, the research recommended for the implementation of the conceptual framework in TVE at the tertiary institutions in Nigeria.

## ABSTRAK

Pendekatan pembelajaran berasaskan pengalaman dalam Pendidikan Teknik dan Vokasional (PTV) di Nigeria telah dikritik kerana tidak memenuhi kehendak semasa. Jabatan PTV tidak menekankan pembelajaran servis mengakibatkan kurangnya kerangka konsep yang dapat dijadikan panduan dalam perlaksanaannya. Kajian ini bertujuan untuk membangunkan satu kerangka konsep pembelajaran servis untuk institusi pengajian tinggi di Nigeria. Kajian ini telah direkabentuk untuk menentukan aspek-aspek dan bidang-bidang yang berkaitan dalam membangunkan kerangka konsep pembelajaran servis yang berkesan dalam PTV. Rekabentuk gabungan jenis *sequential explanatory* telah digunakan dalam kajian ini. Dua ratus enam puluh tujuh (267) responden yang terdiri daripada 206 pensyarah, 45 ketua jabatan dan 16 dekan dan timbalan dekan fakulti dari 8 jabatan pengajian tinggi PTV iaitu dari 15 institusi pengajian tinggi di Timur Laut Nigeria telah dipilih sebagai sampel menggunakan teknik rawak strata. Enam pakar pembelajaran servis dalam PTV telah ditemubual. Penyelidik telah membina soal selidik berstruktur yang terdiri daripada 67 item dan protokol temubual berkenaan enam aspek utama pembelajaran servis dan telah digunakan sebagai instrumen dalam mengumpul data-data kuantitatif dan kualitatif. Instrumen ini telah disahkan oleh tiga orang pakar, manakala kebolehpercayaan soal selidik telah dibuktikan melalui kajian rintis. Analisis regresi *linear stepwise*, model persamaan berstruktur (SEM) dan *confirmatory factor analysis* (CFA) telah digunakan untuk menganalisis persoalan kajian kuantitatif manakala analisis kandungan telah digunakan untuk menganalisis persoalan kajian kualitatif. Kajian berjaya menghasilkan kerangka konsep pembelajaran servis PTV untuk pendidikan tinggi Nigeria yang mengandungi objektif kursus, keterlibatan fakulti dalam komuniti, hasil pembelajaran pelajar, prosedur penilaian/refleksi, keperluan perkhidmatan komuniti dan bantuan perkhidmatan pedagogi yang merangkumi enam puluh tujuh bidang pembelajaran servis dalam PTV. Sebagai rumusan, kajian ini mencadangkan agar kerangka konsep ini dapat digunapakai di institusi-institusi pengajian tinggi PTV di Nigeria.

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## LIST OF ABBREVIATIONS

TVE	-	Technical and Vocational Education
SL	-	Service Learning
TVEP	-	Technical and Vocational Education Program
FRN	-	Federal Republic of Nigeria
NPE	-	National Policy on Education
SIWES	-	Student Industrial Work Scheme
IT	-	Industrial Training
NUC	-	National University Commission
NBTE	-	National Board for Technical Education
NCCE	-	National Commission for Colleges of Education
SPSS	-	Statistical Package for Social science
AMOS	-	Analysis of Moment of Structures
SEM	-	Structural Equation Modeling
CFA	-	Confirmatory Factor Analysis
NYSC	-	National Youth Service Corps



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## **CHAPTER 1**

### **INTRODUCTION**

Experiential learning practices are very important springheads in TVE from its inception till now. Learning by doing facilitated through an effective experiential learning practice which is full of activities that have direct association to student's intellectual development is the major focus of TVE. Currently, student's intellectual development constitutes the basic ingredients in the recent shift to knowledge based economy. This is why employer of labour needs graduates from tertiary education institutions who are well equipped in order to function effectively to the development of the society.

This considerable shift has post serious challenges to educational institutions. (Brown *et al.*, 2008; Feit, 2008) highlighted that the knowledge based economy workforce implies and requires sound preparation of higher education students. Consequently, this implies that tertiary education institution must reinforce and diversify their teaching and learning practices toward seeking opportunity for students to engage in educational activities that are relevant in a changing world. As well as educational activities that focus on cultivating social responsibilities inside and outside the school

However, to achieve this substantial school improvement; efforts is required to institutionalized an effective teaching and learning Frameworks that are based on knowledge of both faculty and student engagement; one that can go beyond the conventional experiential learning practices in the present TVE curriculum. A vibrant experiential learning practice that can provide viable opportunities for responding to change in the delivery and structure of teaching and learning is deem very critical in

TVE (Brown *et al.*, 2010). Service-learning practice according to (Miller, 2003; Sperling, 2007) provide and train students for careers in the emerging 21st century workforce, support student academic achievement, maintain school relevance, increase talent and build a foundation for lifelong learning through a collaborative process between school and community. It also includes students as active participants in shaping their futures (Cook-Sather, 2002).

Furthermore, TVE requires experiential learning practice that is well structure to support community need and provide flexible innovative approaches to program development (Shannon and Bylsma, 2006). In line with this observation, service-learning which is a flexible and dynamic approach of experiential education can be redesign and integrated into the teaching and learning of TVE in order to stimulate the presence challenges. For instance, the fact that TVE in Nigeria emphasizes student's skills acquisition for self-reliant. Therefore, experiential learning practice particularly, the service learning shall be part and parcel of TVE (Aliyu *et al.*, 2014; Bappa-Aliyu, 2012; Clark *et al.*, 2010). This could effectively alleviate the recent emphasis of employers about the need for TVE graduates to posses relevant employability skills including core subject areas skills (Kacirek *et al.*, 2010; Kefela, 2010).

Integration of service learning has been view from various perspectives in the service learning literatures. However, the most general and consensus view has lament on specific aspects that encompass course learning goal, students' learning objectives, faculty involvements, community service needs, pedagogical supports and reflection/assessment procedures (Bender *et al.*, 2006; Steinberg *et al.*, 2010). These aspects are central organizing elements across many disciplines for designing of service-learning as an integral ingredient that support academic program. Therefore it is legitimate to declare that the success of service learning integration relies on these aspects.

This philosophical work of service learning of Steinberg *et al* was build on the basis for integrating service learning as a unit bearing course in an educational program. In recognition to the important of experiential learning in TVE, this research proposes for the integration of service learning as a unit bearing course not as an instructional

method. Currently, other forms of experiential learning such as the internship and others are included as unit bearing course in TVE program in Nigeria. Hence, need for strict adaption is virtually important.

## **1.1 Problem Background**

Everywhere in the World, the higher education institutions exist to provide trilogy functions of teaching and learning, research and community service. This has been the primary mission of universities, polytechnics, colleges and others high schools (Zollinger *et al.*, 2009). This development can further be understood from the mission and vision statement of almost all tertiary education institutions particularly in Nigeria. However, to achieve this mission, all educational programmes must play a statutory role.

Specifically, technical and vocational education program that is at the forefront of development are suppose to respond positively toward the accomplishment of the mission of higher education. For TVE to contribute to this development it require effective and efficient teaching and learning that can involve students in a highly relevant experience. This can make the programme to contribute meaningfully and effectively to the development of the society. Supporting this assertion, it was highlighted that education specifically TVE must strive to meet the needs of the community through social engineering activities and students' participatory activities that can lead to the development of the society (Akanmu, 2011; Dasmani, 2011).

In light of these challenges, TVE programmes at the tertiary education level in most part of the world employs experiential learning practice to support and respond to its objectives. Experiential learning practices refers to project-learning, industry-based internships, clinical practices, pre-service teachers' placements, service-learning, community service numerous to mention but a few (Gamble *et al.*, 2010; Jones *et al.*, 2009; Miliszewska, 2008). Such practices are usually integrated in the TVE programme in order to support and engage students to acquire practical related skills that can be useful to them in future career life.

Service-learning programme is a phrase employed to describe the deployment of community services into the school curriculum in such a way that the community benefits from the service and the students learn skills that are relevant to their future profession (Parker *et al.*, 2009). Furthermore, the service learning practice promotes effective teaching of course content while engaging students to develop knowledge, skills, and cognitive capabilities to deal effectively with complex social issues. Students engagement in service learning helps them to apply theoretical knowledge learnt in school to real life practical experience outside school (Prentice and Robinson, 2010). The practical inclusion of experiential learning particularly, the service learning could have been the most significant approach that can elevate the relevance of TVE in partaking the academic mission of teaching and learning, research and community service.

Today, many universities, polytechnics, colleges and others high schools around the world have community service as part of their mission statement. It is either directly or partially included in the institutional mission statement as “teaching and learning, research and community service (Clinton and Thomas, 2011; Kezar and Rhoads, 2001). Specifically, this related development is also found in the mission statements of most of the higher education institutions in Nigeria. For instance, it is lamented as a mission that “advancement of learning through teaching and research, foster creativity and inventiveness, as well as patriotism and community service in Nigeria and the world at large. (Imo State University, 2008). Also, “create a functional, globally competitive & research-focused University, but responsive to the needs of the society (Federal University of Technology Minna, 2012), furthermore, to train highly skilled personnel who can conduct result oriented researches for building and sustaining in Nigerian community (Federal college of education Potiskum, 2012) and finally, provide training in science, technology and commerce for the development of industrial, agricultural and marketing research for the benefit of the society (Federal Polytechnic Bauchi, 2010) and numerous to mention but few.

All along, this has been the academic mission statement of most of the universities, Polytechnics and colleges in Nigeria, so also applied to most of the tertiary institutions in African countries and other part of the world. Scott, (2006) and Aliyu *et al* (2014) stated that one of the ways in which tertiary education may achieve and

demonstrate spelt out mission, is through the integration of practically oriented experiential learning practice that have direct relevant to the community.

Consequently, for TVE programme in Nigeria to realize its objectives and same time to contribute positively toward achieving the target of community service as highlighted in the faculties mission documents, it requires appropriate experiential learning programme which is academically sound, practically relevant and community based to support and respond to the immediate needs of the present society. Also, (Bünning, 2007) Okafor (2011) mentioned that for TVE in Nigeria to remain vibrant in order to produce graduates that can respond positively and make meaningful contributions to community and the general world of work; a high quality experiential learning system needs to be integrated. Economy (2011) & added that this is one of the ways to prepare and produce TVE graduates that can be skillful, self-reliant, responsible citizens and to cope with the ever-increasing changes in the 21<sup>st</sup> century world of work.

Today as the Knowledge, economic and technology sectors face in the new millennium, employers of labour require TVE graduates that can work confidently and effectively from the time they start their employment (Subramaniam and Freudenberg, 2007). Many researchers, among them are (Akande, 2007; Akanmu, 2011) Venatus & Ikwuba (2010) notes that employers are emphasizing for TVE graduates that are technically competent in their chosen field with emphasis on core subject skills as well as generic skills that include problem solving, critical thinking, interpersonal and teaming skills, effective communication, leadership skills. Besides, the Federal Government of Nigeria in its National Policy on Education has demonstrated the needs for TVE training institutions to prepare their students with the 21<sup>st</sup> century employability skills (FGN, 2004).

Based on the concept and context of Service learning as an instructional approach, it appears to be a relevant and suitable way that can enhance the delivery of technical and vocational education. The practical relevance of the SL in demonstrating the idea of community service is obviously clear. No doubt, if properly and effectively implemented in TVE programmes in Nigeria; it could support and promote the delivery of the TVE program while making students to understand and develop knowledge,

skills, and other cognitive capabilities that can make them to effectively cope with difficulties of social life and issues after graduation. Virtually, SL can help to connect academic experience learnt in the school to real life situation in the community.

In another related development, researches, educator, and book Authors in the educational fields that worked on SL have clearly outlined its benefits on enhancing the 21<sup>st</sup> century skills (Life skills) needed from students. As a matter of urgency, it has become necessary for TVE programmes in developing countries particularly Nigeria to adapt such an imperative strategy in the delivery of TVE courses. Instructional delivery of TVE via an effective approach can facilitate in producing graduates with the suitable forms of employability skills. In addition to this, when students are exposed to life skills such as problem-solving, interpersonal skills, enterprising skills, thinking skills, project management skills and leadership skills, it makes them to experience the richness and excitement of knowledge about the natural world and be aware of difficult real-world problems (Oranu, 2010).

Practitioner of service learning have also mentions that students involvement have the potential of addressing challenges facing the community member, community agencies as well as business forces in both local and international. As a result, students have the high possibilities of linking academic knowledge and skills of subject to real life situation (Ropers-Huilman *et al.*, 2005). However, students understanding of TVE concepts that have direct bearing to learning by doing in a virtually supported environment; definitely, students exposure to the community environment through an organise instructional approach such as the service learning can facilitate the delivery of the TVE system.

Service-learning is one of the constructivist instructional approaches which is experientially based support the concept of learning as a process which creates knowledge through transformational experience (Nirmala and Soma, 2010). It Engage students in experiential learning and provides opportunities to reflect on learning from experience and express in action what has been learnt, thereby promoting effective learning. Experiential learning theory is based on the following six propositions (Kolb and Kolb, 2005):

- Improvement of learning in higher education requires a primary focus on engaging students in a process that best enhances their learning – a process that includes feedback on the effectiveness of their learning efforts;
- Learning is best facilitated by experience which focuses on the students' beliefs and ideas so that they can be analyzed and integrated with new ideas;
- Reflection and action during the learning process draws on the resolution of conflict, disagreement and differences;
- Learning is a holistic process of adaptation to the world through the integration of thinking, feeling, behaving and perceiving;
- Learning occurs through assimilating new experiences into existing concepts and accommodating existing concepts to new experience; and
- Learning is a process of creating knowledge – a process whereby social knowledge is created and recreated in the personal knowledge of the learner.

The above strongly support the idea of learning as a process which builds knowledge through transformational experience. This could be vital and relevant to teaching and learning in the TVE context.

Integration of service learning in the education system specifically, TVE in Nigeria is undeniably acceptable. More especially that experiential learning approach has a sound footing in the Nigerian education system (Odu, 2011). This can be trace back to establishment of student's industrial work scheme in 1974 (SIWES). The scheme is categorically an internship program that was design to link academic theory learn in school with real life practical experience in the industry (Abubakar, 2012). This scheme involve TVE students in an experiential learning set up. Yet this scheme with other form of experiential learning approaches have start facing criticism of lacking relevance.

Therefore, this footing paves path to integration of service learning in TVE at the Nigeria tertiary education. although, variation that are to exist if service learning is to be integrated include consideration in the aspects of Goals/objectives of the course, faculty involvement, community identify needs, pedagogical support services (Bender, *et al.*, 2006; Berle, 2006). Thus, other similarities that need total overhaul includes students learning outcomes and reflection/assessment procedures (Sheehey, 2012; Steinberg, *et*



*al.*, 2010). Hence, all the mention aspects were categorically considered for the development of the conceptual Framework in this research.

It is important to note that for any academic unit bearing course must have a stipulated goals/objectives that clearly focus to enunciate target impacts. Research has indicated that service learning that swins between academic institution and community/community agencies its goals has to widen up to encompass on academic, social and cultural variables within the two boundries (Butin, 2006). Service learning that is within the scope of TVE, can fits in to captures these variables. In this regard, service learning can be integrated in TVE at the tertiary education either a separate course in the curriculum (Anderson *et al.*, 2001) or as an instructional method for teaching subject concepts (Mehta and Sukumaran, 2007).

Faculty involvement aspect is paramount to service learning integration. Faculty are central in organising and planning for effective service learning which can support the its goals. thoroughly and carefully planning of service learning includes initiating a strong links with community/agencies for the service learning activities (Kaye, 2004), scheduling and prioritising project time and relevant projects that can promote students intellectual development (McKay and Estrella, 2008) and faculty interaction in the areas of course assessment for evaluating student learning outcomes (Vaughn, 2010). Ultimately, the role of faculty in the integration of service learning also include institutional and professional development to sustain the growth of service learning (Abes *et al.*, 2002). However, service learning practitioner have said a lot on faculty involvement.

Many universities and colleges that Integrate of service learning in many instances have considered students' learning outcomes in different dimensions. Service learning is known about its learning by doing numeclature to promotes subject matter skills as well as other skills such as problem solving skills, analytical skills, interpersonal skills, critical thinking skills and many more (Aliyu, *et al.*, 2014; Allsopp *et al.*, 2006). Uniqueness of service learning in permitting students to discuss and openly exhibit their work in a different settings such as displays, performances, and presentations offers them chance to share, validate and learn from others (Bender, 2008;

Gilkey and Earp, 2006). This has made other conceptual Frameworks to gives priority to subject related skills and other forms of generic skills with the scope of students learning outcome aspect in service learning

Identify community service needs aspect is integral in service learning integration. Guesswork and considerations within the aspect of community service needs mostly depend on the specific discipline where service learning is integrated (Guthrie and McCracken, 2010). Existing literatures on service learning gives information on developing and implementing service learning in the aspect of community service needs to include issues present in the areas of such as educational facilities in school, environmental issues, family related issue, Agricultural related issues, health related issue wealth and many more (O'Grady, 2014). Mostly, community service are selected as service learning project on the basis of their worrisome to the communities especially among the poor masses. However, these types of services were acknowledged to be deal with through the application of individuals' sound vocational skills that are duly obtained in TVE (Daggett, 2003; Kavanagh and Drennan, 2008).

Furthermore, integration of service learning as a unit bearing course in any higher education virtually falls with the scope of experiential learning approach. Certainly, for service learning to promote institutional goal; it has to be given the necessary priority in academic planning. This shall give sound consideration interm of resources and enabling mechanism to support its implementation. Provisions in the aspect of pedagogical support services in area such as transportation, students orientation, technologies, insfrastructions and staffing are considered important in the service learning literature (Bender, *et al.*, 2006; Berle, 2006). Moreover, resources including brochures, pamphlets, and practical guides are also important to support service learning lesson (Jenkins and Sheehey, 2011). However, Many universities and colleges usually outlined and produced institutional mechanism and resources necessary for effective integration of service learning (Bringle and Hatcher, 2007; Bringle *et al.*, 2012). Therefore, pedagogical support service was also considered as an essential aspect for integration of service learning in TVE.

Lastly, the aspect of reflection/assessment procedures aspect in service learning focus on evaluating the course and evaluating student academic learning. Although, most of the procedures use in service learning assessment with the exception of few are found applicable in other experiential learning approach such as the internship, field education and other. Evaluation of students learning in an experiential learning setting in TVE require a unique consideration. In general, much have been suggests concerning assessment of service learning (unit bearing course) and service learning outcomes. For instance (Cooks and Scharrer, 2006; Jenkins and Sheehey, 2011) suggests for the use of focus groups, interviews, journal task analysis, and analysis of videotaped interactions. Also the of reflection such as purposeful reflections such multimedia presentation, log book, documentary analysis are applicable in service learning (Clinton and Thomas, 2011). Evidences reveals for the use of rubric in connection to information obtain from reflection result for assessment in service learning (Gelmon, 2000; Grossman, 2009). Therefore, it is important to consider reflection/assessment procedures when developing conceptual Framework for service learning integration in a program particularly TVE.

Regrettably, the current experiential learning approach in Nigerian Technical and Vocational education (TVE) has been criticized for not meeting the desired challenges. The TVE departments fail to emphasize service learning due to lack of conceptual framework that specifically, gives emphasize on the six aspects of service learning which can guide the implementation of service learning. Hence, this research aimed to develop a conceptual framework of service learning in TVE for Nigerian tertiary education.

## **1.2 Problem Statement**

Date back to time immemorial and to date, higher education institutions in Nigeria have acknowledged and developed policy papers that give a clear understanding of community engagement such as the service-learning as a potential mean to hold for transforming higher education in relation to societal needs, and engaging students to acquire the skills necessary for the contemporary world work. Yet to the best of the

researcher knowledge, no known existing service learning integration Framework in the literature that provide sufficient information about SL integration in TVE toward enhancing students' engagements in the Nigerian Tertiary Education level. This has prompted the researcher to raise question that reveals the highlight of the existing literature gap pertaining to this study as: What is the appropriate Framework of service learning integration in technical and vocational education toward enhancing students' engagements at Nigerian Tertiary education level?

Despite research evidences that support and highlighted on the importance of service learning toward facilitating higher education institutions to ascertain community services and students' engagement, yet there is a strong resistance to service learning integration as a core function in the academic arena (Bender and Bender, 2008) . Researchers around the world in different educational fields, for instance (Bheekie *et al.*, 2011; Joint EducationTrust, 2000; Walter, 2011) , (Sedlak *et al.*, 2003) are having common view that, if the main purpose of higher education is to generate and spread intellectual knowledge through teaching, student engagement, research and community service, then Service-Learning specifically provides the necessary support for ascertaining this great roles. On the account of students' engagements in school; Researchers namely (Bringle *et al.*, 2006; Hutchison, 2001), and Furco (2002) describes the rationale of higher education as a training environment to engage students to acquire relevant knowledge, skills, and attitude that can make them to sustain good living and contributes meaningfully to the development of society.

Unfortunately, researches revealed that, one of the critical issues that contribute to the production of low quality graduates in TVE is improper student engagement in relevant academic activities that can provide the student to learn what is really required in the 21<sup>st</sup> century world of work (Akande, 2007; Akanmu, 2011). (Hiebert and Borgen, 2002; UNESCO/ILO, 2003) in their global Monitoring report, emphasized the role TVE of prepares the mind of the individual to work through the acquisition of relevant knowledge and skills is by giving paramount importance to effective experiential learning approach.

In recent years, the current experiential teaching and learning methods (internship, Field education, apprenticeship) en TVE (Furco, 1997 & 2002) have been criticized for not yielding the desired skills to meet the needs of the workplaces (UNESCO, 2002). Yet this has been the regular practice in Nigerian TVE. However, the process of service-learning integration in any educational programmes starts by ascertaining an appropriate conceptual Framework of integration (Bender, 2005, Bender, et al 2006 & JET 2006).

### **1.3 Objectives of the Study**

The main objective of this study was to develop a conceptual Service learning Framework for integration in Technical and vocational education at the Nigerian tertiary education level. The study seeks to specifically develop a conceptual Framework on the six aspects of service-learning framework for integration in TVE. The specific objective of this study was developed based on the six main aspects as identified in the literature. The six aspects were course learning objective, faculty in community involvement, student learning objectives, pedagogical approach, community identify services and reflection/assessment procedures.

Based on the aforementioned objective, the following six specific objectives were formulated to guide and ease the conduct of this study:

- i) Determine the influence of each of the six aspects of service learning (course-learning objective, student's learning outcomes, community service needs, faculty in community involvements, pedagogical support services and reflection/assessment procedures) for effective service-learning in TVE at the Nigerian tertiary education level.
- ii) Determine the areas considered relevant in the six aspects for effective service-learning in TVE at the Nigerian tertiary education level.

- iii) Determine the influence of areas considered relevant on six aspects for effective service-learning at the Nigerian tertiary education level.
- iv) Determine the relationship between areas considered relevant in the six aspects for effective service-learning in TVE at the Nigerian tertiary education level
- v) Determine the perception of policy makers, administrators and lecturers on areas considered relevant in the six aspects for effective service-learning in TVE at the Nigerian tertiary education level
- vi) To Develop a conceptual framework based on the areas considered relevant in the six aspects for effective service-learning in TVE at the Nigerian tertiary education level.

#### **1.4 Research Questions**

The following six research questions were formulated and answered in this research:-

- i) What is the influence of each of the six aspects of service-learning for effective service-learning in TVE at the Nigerian tertiary education level?
- ii) What areas are considered relevant in the six aspects for effective service-learning in TVE at the Nigerian tertiary education level?
- iii) What is the influence of areas considered relevant on the six aspects for effective service-learning in TVE at the Nigerian tertiary education level?
- iv) What is the relationship between the areas considered relevant and the six aspects for effective service-learning in TVE at the Nigerian tertiary education level?

- v) What is the perception of TVE policy makers, administrators and lecturers on the areas considered relevant on the following six aspects for effective service-learning in TVE at the Nigerian tertiary education level?
- vi) What is the appropriate conceptual framework indicating the areas considered relevance in the six aspects of service-learning for TVE at the Nigerian tertiary education level?

### **1.5 Research Hypothesis**

The following null hypotheses was tested at 0.05 levels of significance:-

- H<sub>01</sub>:** There is no significant relationship between the areas considered relevant and the six aspects for effective service-learning in technical and vocational education at Nigerian tertiary education level.

### **1.6 Scope of the study**

The research developed a conceptual framework for service-learning TVE. Based on the literature reviewed, priority was given to areas which were considered relevant in the aspects course learning objectives, students' learning outcomes, faculty involvements, community service needs, pedagogical supports and reflection/assessment procedures. The conceptual framework was developed for technical and vocational education in the Nigerian tertiary education only. This is because the areas covered in the conceptual framework were based on the features of TVE that can fit for effective service learning.

The research was conducted in Universities, Polytechnics and colleges of education that offers TVE program. The three tiers of TVE programs that were

accredited by National University commission award Bachelor degree, (B.Tech, Ed), National Board for technical Education (NBTE) offer National Diploma (ND) and Higher National Diploma (HND) and National Commission for Colleges of Education award Nigerian certificate of Education (NCE) and Bachelor Degree (B.Ed). These institutions were the Universities, Polytechnics and Colleges of Education. All the institutions were belonging to the federal and state governments were considered in this research.

The research was mainly to cover all TVE programs in the Nigerian tertiary institutions but limited to northeastern Nigeria due to current security challenges faced in the country. The research was carried out on administrators, head of departments (HODs) and lecturers in the TVE programs of the selected tertiary institutions. State government institutions as well as the federal government owned institutions were involved in the study. This was because they operate on same curriculum, have similar entry requirements and under same supervisory bodies.

### **1.7 Significance of the Study**

The need for this study is traced to the vital importance of experiential learning practice in the field of technical and vocational education. The fact that this discipline plays a vital role in the overall technological and economic development of many countries, it becomes imperative to explore by means of empirical research the most vital instructional pedagogy that can promote the teaching of generic skills components among TVE students in Nigeria. In line with this, it is hoped that the result of this study will assist the practicing TVE teachers to select and use the effective experiential learning strategy so as to enhance the quality of students' learning specifically on the areas of employability skills needed in the field of Technical and vocational education.

More importantly, the fact that service learning has been recognized as an experiential learning strategy that enable educational facilities to accomplish their mission goal of community service, it is also hoped that this study will enlighten TVE



faculties on the need to adopt the practice of service learning to enable them accomplish the mission of community service as vividly spelt out in most of the educational faculty's mission. This will also help the faculties to gain recognition and partners with their immediate community.

Thirdly, the study will expose TVE students to acquire the relevant generic and subject matter skills in their academic career that are currently needed by employers in both global and Nigerian contexts. This will equally widen their experience and make them to cope with the global technological challenges within their area of expertise. Finally, the findings from this study will add to the wealth of literature and also serve as a reference information material to researchers in the areas of Education, specifically TVE.

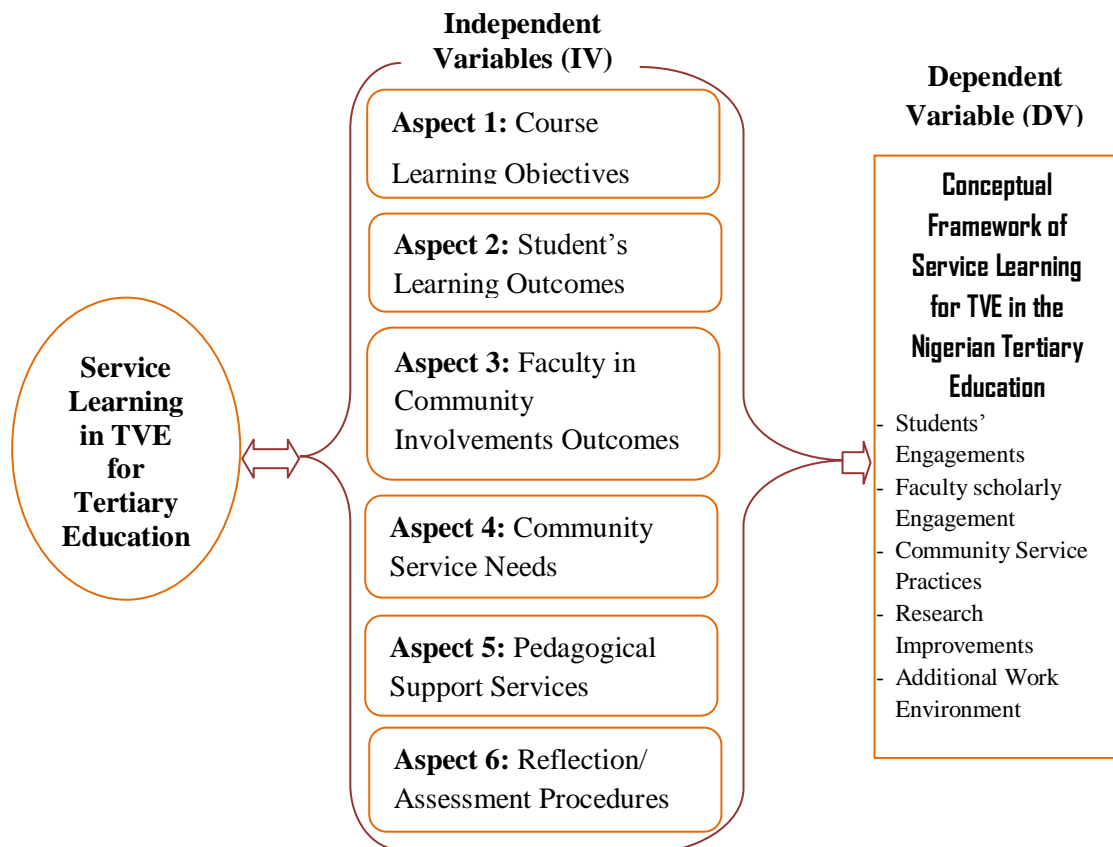
## **1.8 Conceptual Framework of the Study**

Based on the literatures reviewed, data collected and experts interviewed in this research, the conceptual framework was designed on the basis of some selected aspects of TVE for effective service learning. The foremost among the aspects include course learning objectives, students learning outcomes, faculty in community involvements, community service needs, pedagogical supports and reflection/assessment procedures (Steinberg, *et al.*, 2010). These aspects were also suggested in numerous service learning researches as sample variables (construct variables) of interest for service learning research. The selection of the suggested constructs was based on their appropriateness for service learning in TVE.

Furthermore, adaptability of service learning in higher education requires consideration of prominence standards that include course objectives, learning objective and reflection/assessment procedures within the context of programs (NSEE, 2007). In addition, service-learning incorporation in higher education programs cannot be unconnected to students and faculty instructional roles, community involvement, institutional issues and curricular issues (O'Bannon and McFadden, 2008). It was further

suggested that administrative support, community involvement, course evaluation processes and faculty involvement are paramount dimensions for effective assimilation of service learning in higher education (Oster-Aaland *et al.*, 2004; Turner *et al.*, 2006). These research positions were merged into six major aspects.

Based on the related aspects of TVE in service learning considered from the aforementioned sources, the conceptual framework shows in figure 1.1 illustrates congruent relationship of the six aspects for effective service learning in TVE at the tertiary education level. Hence, at the center of the framework represents the six aspects (independent variable) which were directly connected having symbiosis relationship with service-learning in TVE. However, the research objectives, research questions and hypothesis in this research were structured accordingly with the six aspects of service learning in TVE. From the basis of the six aspects the conceptual framework of service learning was developed (dependent variable) as output of this research.



**Figure 1.1** Conceptual Framework of the Research

## 1.9 Operational Definition of Terms

For the purpose of this study, some operational research terms were identified as having peculiar meaning to what is obtainable in their universal meaning. These terms were defined in relation to how they were applied in this study in order to provide a better understanding of this research:-

**1.9.1 Conceptual Framework of Service-learning:** this refers to a depiction of prototype of service learning in technical and vocational for the purpose of introducing the new experiential learning approach into TVE covering six aspects (course learning objectives, student's learning outcomes, faculty in community involvements, community service needs, pedagogical support services and reflection/assessment procedures).

**1.9.2 Service Learning in TVE:** refers to a unit bearing course in the curriculum of TVE that is design to encourage school and community collaboration which student teaching and learning method under which students learn and develop through thoughtfully organized service that is conducted to meet the needs of a community and is coordinated with an institution of higher education (Polytechnic), and with the community; helps foster learning outcomes; based on the academic curriculum. The students enrolled reflect on the service experience and is based on the principles of hands-on teaching and learning (Hsiao and Chang, 2003) .

**1.9.3 Community Service Needs:** this refer to classes of public services within the boundry of TVE that can be found in the community either through individuals community member or private and public agencies for students to partake their

service learning task. This group of services are represent in the conceptual Framework to guide TVE programs when implementing service learning.

- 1.9.4 Course learning objectives:** this refers to long term goals of integrating service learning as a unit bearing course in the curriculum of TVE that can occurs through effective collaboration of TVE program and community/agency in order to meet students academic learning, social and civic responsibility that are clearly stated in the curriculum.
- 1.9.5 Student Learning outcomes:** this refers to students learning expectations that comprises of core subject skills and other forms of generic skills that students can acquire through their participation in an experiential learning setting (service learning)
- 1.9.6 Faculty in Community Involvements:** this refer to instances and roles that teachers, administrators, head of departments in TVE programs can play to facilitate the partnership between faculty and community for effective integration of service learning in TVE.
- 1.9.7 Pedagogical Support Services:** this refers to basis necessities such as infrastructural facilities, human support services, information and communication technologies, and that are require to support the effective integration of service learning in TVE at the tertiary education level.

**1.9.8 Reflection/Assessment procedures:** these are methods such as journal, multimedia presentation, checklist analysis in which students reflect their service learning experiences; the reflection data obtained are usually used along with a rubric for evaluating student service learning outcome.

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## **APPENDIX A**

### **MODIFIED QUESTIONNAIRE**

#### **CONCEPTUAL FRAMEWORK OF SERVICE-LEARNING FOR TVE IN THE NIGERIAN TERTIARY EDUCATION**

##### **INTRODUCTION:**

This research questionnaire is proposed to seek the perceptions of TVE Lecturer, Administrators and Policy Makers from Technical and Vocational Education programmes in High Academic Institutions in Nigeria offering Bachelor Degree of Technology Education (B. Tech. Ed.), Higher National Diploma (HND), National Diploma (ND) and Nigeria Certificate in Education (NCE) levels. However, information on the areas considered relevance on the components of Course objective, Employability skills, community identify need, school community-based need, reflection and assessment need, and pedagogical approach for integrating service-learning in TVE in Nigeria will be gathered to develop a service-learning conceptual framework. Therefore the following four point Likert scale type will be used for rating the responses as follows:

**HR (4) – Highly Relevant**

**MR (3) – Moderately Relevant**

**R (2) - Relevant**

**NR (1) – Not Relevant**

##### **SECTION A: PERSONAL DATA OF THE RESPONDENTS**

Name of School:-----  
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Designation/Position:-----

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Department: -----

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Years of Working Experience: -----

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**Research Question 1:** What is the perception of Lecturers, Administrators and Policy makers on the areas considered relevant on the aspects of service-learning integration in TVE programmes in Nigeria?

To integrate service-learning in Technical and Vocational Education, the following areas of **Course Learning Objective** are to be considered:

S/No	Questionnaire Items	NR (1)	R (2)	MR (3)	HR (4)
1.	Integrate theory and practice				
2.	Sharpen the student's ability to solve problems creatively				
3.	Improves skills of working collaboratively				
4.	Arouse students' interest and attitude toward TVE				
5.	Permit student to broaden the habit of critical reflection				
6.	Inspires an appreciation of the skills required for lifelong learning				
7.	Links to networks of professionals and community members				
8.	Motivate students to work hard				
9.	Offers valuable intellectual experience for job creation				
10.	Strengthen school-Community relationship				
11.	Promotes reflection on how to integrate skills, and ideals in a career				

12.	Enhances student's sense of civil obligations				
13.	Facilitates Research ideas and clarifications				
14.	Assist students to explore workplace potentials				
15.	Gives avenue for faculty to ascertain community service mission				

For additional suggestion(s) on the area of **Course Learning Objectives** that you considered relevant can be presented below:

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To integrate service-learning in Technical and Vocational Education, the following areas of **Employability Skills** are to be considered:

S/No	Questionnaire Items	NR (1)	R (2)	MR (3)	HR (4)
1.	Technical Skills				
2.	Problem-solving Skills				
3.	Decision-making Skills				
4.	Communication Skills				
5.	Entrepreneurial Skills				
6.	Leadership Skills				
7.	Team-working Skills				
8.	Analytical Skills				
9.	Research Skills				
10.	Numeracy Skills				
11.	Project-planning Skills				
12.	Negotiation Skills				
13.	Time management skills				
14.	Interpersonal Skills				
15.	Critical thinking Skills				

For additional suggestion(s) on the area of **students learning outcomes** that you considered relevant in integrating Service Learning in TVE can be presented below:

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To integrate service-learning in Technical and Vocational Education, the following areas of **Community service Needs** are to be considered:

S/No	Questionnaire Items	NR (1)	R (2)	MR (3)	HR (4)
1.	Facilitating the roles of NGOs				
2.	Animal husbandries services				
3.	Gardening of vegetables				
4.	Facilitating roles of micro business organization				
5.	Nursing , growing and planting of trees				
6.	Construction and maintaining erosion pathway				
7.	Provision on home catering services e.g. baking, cooking, etc.				
8.	Maintenance & repair of infrastructure & electrical appliance				
9.	Identification of Vocational related resources				
10.	Design and construction of public spaces/infrastructures				
11.	Storing and preserving of farm products				
12.	Vocational-based information to artisans and entrepreneurs				
13.	Production of household equipment/tools				
14.	Up Skilling for artisans and entrepreneurs				
15.	Residential Landscaping and decorations				
16.	Maternal & Health care delivery				

For additional suggestion(s) on the area of **community service needs** that you considered relevant in integrating Service Learning in TVE can be presented below:

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To integrate service-learning in Technical and Vocational Education, the following areas of **Reflection and Assessment** are to be considered:

S/No	Questionnaire Items	NR (1)	R (2)	MR (3)	HR (4)
1.	Small-Team Work				
2.	Reflective class Paper writing				
3.	Ethnographies				
4.	Journals (individual; Guided; Key-Phrase; Dialogue)				
5.	In-class Multimedia Presentations				
6.	Narratives (stories)				
7.	Theoretical Apply Papers				
8.	Presentations to Public Workplaces				
9.	Team Problem-Solving				
10.	Products Constructed for Workplaces				
11.	Observational analysis				
12.	Class Discussions				
13.	Problem-Solving Papers				
14.	Agency-Work Analysis Papers				
15.	Case Studies				
16.	Student's Log-book Record				
17.	Checklist analysis				

For additional suggestion(s) on the area of **Reflection and Assessment** that you considered relevant in integrating Service Learning in TVE can be presented below:

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To integrate service-learning in Technical and Vocational Education, the following areas of **Community Service Needs** are to be considered:

S/No	Questionnaire Items	NR (1)	R (2)	MR (3)	HR (4)
1.	Research and scholarly works				
2.	Long-term meeting with agencies and organizations				
3.	Avenue for students' learning of course content				
4.	Research and community development				
5.	Good chances of renewing teaching, research and service triggers				
6.	Increased opportunities to engage students of all learning styles				
7.	Additional experiential learning settings				
8.	Increased retention of multi-ethnic students				
9.	Enhanced town-gown relationships				
10.	Increased access to community partners as co-teachers				
11.	Support Interdisciplinary Work				
12.	Gives Basic Support/Supervision Of Students				
13.	Partnered in sourcing Funding				
14.	Create formal partnership structures (risk management/ MOU)				
15.	Provides Critiques and Participates in Assessment				

For additional suggestion(s) on the area of **School Community-based need** you considered relevant in integrating Service Learning in TVE can be presented below:

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To integrate service-learning in Technical and Vocational Education, the following areas of **Pedagogical approach** are to be considered:

S/No	Questionnaire Items	NR (1)	R (2)	MR (3)	HR (4)
1.	Field Trip/ excursion work				
2.	Problem solving				
3.	Observation				
4.	Seminar				
5.	Peer tutoring				
6.	Work-based learning				
7.	Video and television				
8.	Formative in-class quizzes				
9.	Case-based learning				
10.	Team-based Learning				
11.	Cooperative learning				
12.	Roleplays				
13.	Project-based				
14.	Simulation				
15.	Virtual Electronics environment				

For additional suggestion(s) on the area of **Pedagogical Approach** that you considered relevant in integrating Service Learning in TVE can be presented below:

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## **APPENDIX B:**

### **INTERVIEW PROTOCOL/GUIDE**

#### **TOPIC: CONCEPTUAL FRAMEWORK OF SERVICE-LEARNING FOR TECHNICAL AND VOCATIONAL EDUCATION IN THE NIGERIAN TERTIARY INSTITUTIONS**

It is well acknowledged that the Nation employment sector is witnessing serious challenges that affect the country's economy. One of the reasons outlined by many researchers that contributed to this episode is the lack of sound preparation of graduates that results to their inability to perform well as required by employers of labour. TVE graduate from high schools are not in exception from this ugly trend specifically in Nigeria.

TVE that is at the forefront of developments must strive to strategies to mechanism that can deal with this frightening concern, through adapting of current experiential learning that support students to acquire the needed skills, right from the training stage. Today most developed Nations have long embraced the Service-Learning scheme in most of their training programme. This has given them a chance to rise their economically, socially, technologically and scientifically.

It is in this regard that the researcher intends to develop a service-learning integration model in TVE for enhancing employability skills of students in Nigerian Tertiary Institutions. Considering the scope of the study, the researcher felt that is important to collect information through Interview with TVE experts particularly those that have service learning Experience. The Interview is designed to collect information from the Experts on factors determinants for the purpose of developing the service-learning Model .

However, the information from the interview will be used to further explain and support the findings from the quantitative study results. As earlier mentioned in the interview agreement forms that all the information generated from the interview will strictly be used for the purpose of this study. The interview is scheduled on the following six (6) service-learning aspects

**A) Course Objective Aspect of Service-Learning in TVE:**

**Opening:** For any academic course bearing unit to be recognized and succeed in ascertaining its primary mission there must be a clear outline objective. However, in your opinion,

1. What is the relevance of Service-learning course objectives in TVE?
2. What parts of the TVE the objectives need to address?
3. What are the Service-learning objective areas you feel are relevant when deploying Service-learning in TVE?

**B) Faculty-in-Community Involvements Aspect of Service-Learning in TVE:**

**Opening:** faculty community involvement/relation is one of the vital components for service-learning integration in any academic programme and in order to successfully implement service-learning into TVE there are specific area that need to be clearly outline. However, in your own view,

1. What is the relevance of faculty community involvement for Service-learning in the context of TVE?
2. What are the categories of faculty community involvement you felt are necessary to be considered?
3. What are the faculty community involvement areas you feel are relevant when deploying Service-learning in TVE?

### **C) Service-Learning Student Learning Outcomes Aspect in TVE:**

**Opening:** student learning outcomes specifically, employability skills is one of the renowned challenges that can address during service-learning practice in academic programme and prior to SL instruction, ascertaining the elements of student learning outcome is of great important. However, in your view,

1. What is the relevance of student learning outcomes to Service-learning course
2. What are the students' learning outcomes that can be deduced from service-learning when deployed in TVE?
3. What are the employability skills that are related to student's learning outcomes you think can be found in Service-learning when properly deployed in TVE?

### **D) Service-Learning Pedagogical Approaches in TVE:**

**Opening:** employing any kind of instructional approach in school most a time requires one or more aiding instructional method to complement the teaching and learning in a course. Similarly, for service learning instruction to be implemented, it may require one or more instructional approach to aid in the implementation of SL in TVE specifically, to address predefined challenges intended to achieve by using SL instruction, in your perception

1. What is the important of supporting Service-learning instruction with other forms of pedagogical approach?
2. What are the possible pedagogical approaches that can be combined into service-learning instruction for TVE?
3. What are the possible instances related to these pedagogical approach you think are helpful when deploying Service-learning in TVE?

### **E) Community Service Needs Aspect of Service-Learning in TVE:**

**Opening:** Identify community service needs is one of the essential components that support the implementation of service-learning in any educational programme. Several issues related to TVE exist in the community that can address through service-learning instruction, in your opinion:

1. What is the relevance of community service needs in Service-learning instruction?
2. What components of the community service needs can be address through service-learning in TVE?
3. What areas of the components you feel are relevant when deploying Service-learning in TVE?

**F) Reflection/Assessment Procedures Aspect of Service-Learning in TVE:**

**Opening:** Reflection/assessment procedure is considered as the most useful ingredient that can be apply to evaluate the strength of service learning instruction in any educational programme. Several evaluation techniques for SL exist and selection of any of the techniques for use mostly depends on a course discipline area. For SL to be successful integrated in TVE, choice of appropriate evaluation procedures is deems very essential. In your opinion:

1. What is the importance of Service-learning instructional evaluation specifically in TVE?
2. What method of Reflection/Assessment procedures can be applied to evaluate service-learning instruction in TVE?
3. What areas of the procedures you feel are relevant when deploying Service-learning in TVE?