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Sustainable Mechanisms in Maintaining Quality Assurance in Technology Education Programme for Employability of Students in Universities in Rivers State

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ABSTRACT

The study determined the sustainability mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State. Five objectives, research questions and hypotheses guided the study. This study adopted a descriptive survey research design. The population of the study was 60 respondents, comprising 40 Lecturers and 20 Instructors in the two Universities in Rivers State. The study was a census as the entire population was studied. The instrument for data collection was a structured questionnaire titled "Sustainability Mechanism and Technology Education Programme for Employability of Students Questionnaire". (SMTEPESQ) The instrument contains seven sections A-E. The instrument was structured on five point likert type rating scale of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly agree (SD). A corresponding numerical value of 5, 4,3,2 and 1 was assigned to the response scale for each item as represented below with real limits. The instrument was subjected to face-validation by three experts and had .75 reliability index using the statistical package for social science (SPSS). The findings of the study revealed that school-industry mechanism are needed for maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State. The findings of the study revealed that collaboration mechanism are needed for maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State. The findings of the study revealed that evaluation mechanism are needed in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State. Based on the findings of the study, the following recommendations were made: industries and University institutions should develop and continuously update curricula to incorporate sustainability principles and current industry practices. This ensures that the content remains relevant and aligns with the latest technological advancements and job market demands. Courses should include elements that address both environmental sustainability and technological innovations.

Keywords: Sustainability Mechanism, Quality Assurance and Technology Education Programme.

INTRODUCTION

The prime of place education occupies in the developmental effort of nations has never been doubted the world over. Perhaps this is why the renowned Professor Blaike remarked that - education is the biggest industry that touches on every fabric of our human endeavor (Alaku, 2019). Various nations, including

Nigeria, have been making conscientious efforts to harness this important sector for optimal development. Although much has been achieved in this regard, much still needs to be done in order to confront effectively the ever-increasing challenges of our time. University education, which is our focal point in this essay, is an important form of investment in Society human capital. It can be viewed as a high level or a specialized form of human capital, contribution of which is very significant to economic growth in any society (Federal Republic of Nigeria 2013). Nevertheless, it is by adequate university education that people get to know their basic rights and seek to get them enforced. This is because part of the reasons for the smooth ride of the unscrupulous ruling elite - lies in the fact that they have constantly worked on the emotions of an ignorant population (Nigerian Educational Research and Development Council NERDC, 2019). Lack of adequate education limits the horizons of the masses and therefore restricts the capacity of the oppressed to extract their rights from state.

Even though the university system in Nigeria has not had a very smooth sail from inception, it has witnessed many successes. The gains that Nigeria has derived from the university education become glaring when one considers the five national goals through which Nigeria ‘s philosophy of education draws its strength, namely, to create a democratic and free society, a just and egalitarian society, a united, strong and self-reliant nation, a great and dynamic economy and a land full of bright opportunities for all citizens (Noah, 2019). University education is more than the next level in the learning process; it is a critical component of human development worldwide. It provides not only the high-level skills necessary for every labor market but also the training essential for teachers, doctors, nurses, civil servants, engineers, humanists, entrepreneurs, scientists, social scientists, and a myriad of other personnel. It is these trained individuals who develop the capacity and analytical skills that drive local economies, support civil society, teach children, lead effective governments, and make important decisions which affect entire societies. This function of education can be seen vividly in action in Nigeria. Furthermore, the university education in Nigeria has led to the develoAesusan66@gmail.com pment of many Nigerians into sound and effective citizens. Here, university education more than any other, has led to higher selfawareness and self-realization of individuals at various tasks, enhanced better human relationships, national consciousness and effective citizenship. One cannot doubt the fact that the university education system has enhanced social, cultural, economic, political, scientific and technological progress in Nigeria. The country is more blessed now with specialists at various fields of endeavour: medicine, law, engineering, philosophy, education, etc. And due to this development, the nation is becoming more and more dynamic and self-reliant as the days go by. This has been made possible because of the university education. Among the programmes offered in the universities include art, sciences, engineering, law, medical sciences, education and technology education and many more. Technology education is the study of technology, in which students "learn about the processes and knowledge related to technology". As a field of study, it covers the human's ability to shape and change the physical world to meet needs, by manipulating materials and tools with techniques. It addresses the disconnect between wide usage and the lack of knowledge about technical components of technologies used and how to fix them (Graube, et al., 2013). This emergent discipline seeks to contribute to the learners' overall scientific and technological literacy. Technology education programme offered in the university leads to the award of Bachelor in technical education with options such as mechanical, building, woodwork , electrical electronics and automobile technology (NUC, 2024). Graduate of the above programmes are supposed technologist who should possess employability skills.

Employability skills are form of work specific active adaptability that enables workers to identify and realize career opportunities. Moreover, employability can be characterized as “the relative chances of acquiring and maintaining different kinds of employment” (Boden, & Nedeva, 2018). Internationally, employability skills have many different names. The variety of the name relies on the countries where the term is used. In Australia, employability skills together with key competencies and generic skills are widely used. Boffo (2019) reports that the majority of students in Australia more familiar with the term of employability skills (75%), continued by key competencies (73%) and core skills (68%). In the USA, however the popular term is basic skills, necessary skills and workplace knowhow. In the UK, core skills,

key skills and common skills are commonly used. Similar to Australia, Canada also uses employability skills (Brown, et al., 2013). In Nigeria, unlikely, the soft skills are the popular term for employability skills which are supposed to be maintained using sustainable mechanisms.

Sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." Sustainable development according to Anyebe, (2016) refers to development which meets the needs of the present, without compromising the ability of future generations to meet their own needs. Adebisi (2013) rightly stated that sustainable development is a holistic approach to improving the quality of human life. Meeting human needs for present and future generation stands out as the bedrock of sustainable development. Lumbreras, et al., (2021) noted that for Technical Education to be sustained, there is the need for mass production of technical education teachers both quantitatively and qualitatively. This may be so because technical education teachers support scientific and technological literacy by demanding a rationale and independent approach to science and technology and its impact on society through school industry partnership.

A school industry partnership is an opportunity to access untold resources which stand to benefit your students tremendously. When a school partners with a local company, everybody wins. The company has a chance to give back to the community, and the students get to experience a whole new type of education (Aghenta, 2018). Building a school industry partnership might seem complicated and daunting, but once the initiative and laying the framework are taken, there is need for collaborative innovation.

Collaborative innovation is the diffusion and application of synergetic theory in the field of scientific and technological innovation, which is to construct different innovative elements into a dynamic operating survival system (Office of the State Council 2017). The resources sharing and optimal allocation are established among the various elements, and the collaborative effect of the innovation field is finally produced which can be sustained through proper evaluation (Wang, 2021).

The evaluation of vocational training is not a new science, but rather involves an attempt to map out and to organise the different elements involved in the exercise of evaluating a given training programme, to apply the findings and concepts of relevant sciences. Evaluation can be used to help in the control and management of what has a substantial and complex activity, to provide information for decisions on the future scale and orientation of training. Its significance has become particularly crucial in the light of the current employment crisis (Abraham-Ibe, 2014). This crisis has lead to a searching reappraisal of employment policies and of the appropriate strategy and role for training. Should additional public expenditure be devoted to training or rather to job-creation ? What sort of training can be given to young persons in order to improve their chances of access to employment? This involve the use of Students' Industrial Work Experience Scheme.

Students' Industrial Work Experience Scheme (SIWES) is a human capital formation programme through industrial attachment for which students are expected to have a practical experience on the basis of theories and principles acquired in the teaching-learning process. However, the prevalence of the inability of participants of SIWES to secure employment after the programme casts doubt on the continuing relevance of SIWES to the contemporary industrial development drive in Nigeria (Abraham-Ibe, 2015). Students' Industrial Work Experience Scheme (SIWES) is a programme designed to expose and prepare students of Universities, Polytechnics, Colleges of Technology, Colleges of Agriculture and Education for Industrial Work situation which they are likely to meet after graduation. It is a skills training programme which affords students the opportunity of familiarizing, acquiring and exposing themselves with the needed experience in handling industrial equipment and machinery that are not usually available in their institutions. The above could be achieve with the use of trained staff.

Training involves providing employees with directed experience that enables them to be more effective in performing the various tasks that constitute their jobs. If effective, the training experiences result in changes in employee's attitudes, work habits, and performance. Abdulhakim, et al., (2016), explained that training is the process of acquiring such knowledge or skill that may be required in the performance of task or multiplicity of such tasks. Beatrice, et al., (2015) noted training helps to reduce gap between performances of workers in terms of work output such that the attainment of organizational goals is

ensured. Training is therefore a planned process designed to modify attitude, knowledge or skill through learning experience to achieve effective and better performance of an activity or range of activities to maintain quality assurance.

Quality can be described as standards of something as compared to other things that is the degree of excellence. High quality teaching/instruction can be regarded as the goodness or effectiveness in teaching/instruction which can result in student learning and satisfaction. Quality teaching and learning in vocational education therefore ensures that students acquire the knowledge, skills and competences that are appropriate for their area of responsibility. There is the need to have teaching standards and develop challenging examinations to document and recognize accomplished teaching (Blazar, 2016). Quality assurance is an essential tool required to ensure efficient vocational educational programmes in our schools for the achievement of manpower development and skill acquisition in our societies. Quality assurance therefore can be described as ways of managing the educational sector, the service provided to ensure that they are kept at high standard that will positively affect its products. Cathy and Kevin (2014) highlighted the fact that to realize zero defects in the work process is a difficult one but maintained that it can be achieved through the use of a quality assurance system that is laid down procedures on how work should be done to achieve a specified standard. It involves injecting quality into the process of training from the very beginning to ensure that the products meet a specified standard. For vocational education to attain quality, it requires working with already established procedures and standards as established by regulatory agencies in the different countries. For example, in Nigeria we have the National Universities Commission (NUC), National Board for Technical education (NBTE), National Commission for Colleges of Education (NCCE) and so many others. These are agents of ensuring quality in vocational education. The duty of ensuring quality actually rests on the teachers/lecturers who are directly in charge of implementing the educational programmes. Quality assurance in vocational education must be viewed holistically from requirements of entry into the programme, duration, quality and number of teacher/lecturers, facilities, instructional materials available, school environment/accommodation, examinations, results, certificate, grading system, exam question items, supervision, moderation etc. It has to be a total package to ensure a meaningful product. The concept of quality assurance hinges on education monitoring. Which is a complete concept aimed at systematically linking planning, analysis and control. Quality assurance must, therefore, involve internal and external influence to ensure efficiency and benefit desired.

Statement of Problem

Technology Vocational Education (TVE) is a crucial aspects of education that study occupations, technology and related sciences. TVE is regarded as an instrument for empowering people especially youths for sustainable livelihood, socio-economic and industrial development. It is education for industry and designed to prepare practically oriented technical and vocational teachers. At university level it is expected to provide individuals with knowledge, skills and competencies for self and paid employment. TVE is designed to acquaint technical oriented personnel with applied skills and basic scientific knowledge required for technological development and sustainability of a country.

The above aims were noted as the general goals of vocational technical education wherever it is taught; whether as basic technology, vocational / technical education at senior secondary level or core technology education at tertiary institutions. At university level, TVE programmes include technology education, business education, Home economics education and Agricultural education. In line with the goals of university education, TVE programme is provided to undergraduates for the acquisition of Bachelor of Science Degree (B.Sc.) and to post graduates for the acquisition of Master of Science (M.Sc.) or Doctor of Philosophy (Ph.D). Undergraduates in TVE programmes in universities are admitted through University Matriculation Examination (UME) and Direct Entry. The programme is for four or five year's duration. Students offering four years are required to pass courses totaling a minimum of 120 credits and 150 credits for students in five year programme (NUC, 2021).

However, the poor performance level of TVE graduates seems as a function of available instructional facilities to which students are exposed to during training. Poor workshop facilities like tools, equipment

and machines used for practical works which are inevitable in the teaching and learning of TVE subjects. Non-availability of adequate workshop facilities creates an imbalance between theory and practical experience in universities for better performance of its graduates in self or paid employment. Owoieye and Yara (2010) also discovered that students in schools with ill-equipped workshops have poor academic performance in their final examinations. The tools, equipment and machines used in TVE in programme areas and options are in vary bad shape (NUC, 2021). In technology education for instance, NUC (2018) in its Minimum Academic Standard, provided list of tools, machines and other equipment required in the various programme options of mechanical/auto mechanics, electrical/electronic technology, wood work and building technology. The above gave rise to assess sustainability mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State.

Aim and Objectives of the Study

The aim of the study is to determine sustainability mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State. Specifically, the study sought the:

1. school-industry mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State.
2. Collaboration mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State.
3. Evaluation mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State.

Research Questions

The following research questions guided the study

1. What are the school-industry mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State?
2. What are the collaboration mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State?
3. What are the evaluation mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State?

Hypotheses

The following hypotheses were formulated and tested at .05 level of significance

H_{O1} There is no significant difference between the mean responses of Lecturers and Instructors on school-industry mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State.

H_{O2} There is no significant difference between the mean responses of Lecturers and Instructors collaboration mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State.

H_{O3} There is no significant difference between the mean responses of Lecturers and Instructors evaluation mechanism in maintaining quality assurance in technology education programme for employability of students in Universities in Rivers State.

METHODOLOGY

This study adopted a descriptive survey research design, The population of the study was 60 respondents, comprising 40 Lecturers and 20 Instructors in the two Universities in Rivers State, The study was a census as the entire population was studied, The instrument for data collection was a structured questionnaire titled "Sustainability Mechanism and Technology Education Programme for Employability of Students Questionnaire". **(SMTEPESQ)** The instrument contains seven sections A-E. The instrument was structured on five point likert type rating scale of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly agree (SD.

The instrument was subjected to face-validation by three experts: One from the Department of Vocational and technology education, Rivers State University, Nkpolu, two from the Department of Industrial Technology Education, Ignatius Ajuru University of Education, Rumuolumeni.

Data collected from the respondents were analyzed using mean and standard deviation to answer the five research questions and t-test statistics were used to test the five null hypotheses at 0.05 level of significance. The decision for hypothesis was; if the calculated value of t (t-cal) is less than or equal to the critical value of (t-crit), accept the null hypothesis, otherwise rejected null hypothesis. The computation of the mean, standard deviation and t-test was carried out with statistical package for social sciences (SPSS).

RESULTS

Research Question 1: *What are the school-industry mechanism in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State?*

Table 1: Mean and Standard Deviation on school-industry mechanism in maintaining quality assurance in technology education programme for employability of Instructors

		Lecturers			**Instructors**		
S/NO	**ITEMS**	**X**	**SD**	**RMK**	**X**	**SD**	**RMK**
1	Granting industry visit to various schools for relevant exposure in practical work	3.39	.837	A	2.75	.982	A
2	Organizing workshops/seminars by industries on contemporary issues in industry operation	3.53	.826	SA	3.05	.833	A
3	Establishing skill acquisition programme for Instructors	3.10	.939	A	2.83	1.097	A
4	Encouraging joint development projects initiative between school and industry	3.11	.772	A	3.14	.953	A
5	Improving collaboration between school and industry through periodic meeting on technological innovation	2.97	.986	A	2.59	1.142	A
6	Provision of scholarship to TVET Instructors	3.04	.755	A	3.19	.915	A
7	Upgrading the curriculum to meet the labour market demand through industry participation	3.09	.903	A	2.82	1.030	A
8	Attracting industry representatives in planning with management of school skill development activities	3.11	.994	A	3.19	.895	A
9	Granting work study permits to TVET Instructors	3.32	.841	A	2.93	.997	A
10	Partnering with school in research/development activities	3.28	.940	A	3.23	.802	A
		3.18	0.50	A	2.97	0.62	A

Table 1 revealed that the Lecturers had mean range of 3.04-3.53 and standard deviation of 0.75-0.99 while the Instructors had mean range of 2.93-3.57 and standard deviation of 0.69-1.08. The closeness of the standard deviation shows the homogeneity of the respondents. They all agreed that school-industry mechanism are needed for maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

Research Question 2: *What are the collaboration mechanism in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State?*

Table 2: Mean and Standard Deviation on collaboration mechanism in maintaining quality assurance in technology education programme for employability of Instructors

		Lecturers			Instructors		
S/NO	**ITEMS**	**X**	**SD**	**RMK**	**X**	**SD**	**RMK**
1	Granting work study permits to TVET Instructors	3.57	.692	SA	2.81	1.039	A
2	Partnering with school in research/development activities	3.56	.732	SA	3.11	.859	A
3	Preparing skill training programmes that will suit the school academic calendar	3.31	.798	A	3.16	.924	A
4	Industry personnel participating in given special lectures	3.28	.750	A	3.35	.719	A
5	Organizing workshops/seminars by industries on contemporary issues in industry operation	2.93	1.004	A	2.95	.932	A
6	Attracting industry representatives in planning with management of school skill development activities	3.16	.941	A	3.42	.844	A
7	Encouraging joint development projects initiative between school and industry	2.95	.875	A	3.09	.860	A
8	Upgrading the curriculum to meet the labour market demand through industry participation	3.25	.931	A	3.32	.736	A
9	Improving collaboration between school and industry through periodic meeting on technological innovation	2.99	1.088	A	3.31	.790	A
10	Narrowing the gap between theory/practical through field trips/excursions	3.05	.990	A	3.42	.625	A
	Ground Mean	3.29	0.50	A	3.10	0.62	A

Table 2 revealed that the Lecturers had mean range of 2.93-3.57 and standard deviation of 0.69-1.08 while the Instructors had mean range of 2.81-3.42 and standard deviation of 0.62-1.03. The closeness of the standard deviation shows the homogeneity of the respondents. They all agreed that collaboration mechanism are needed for maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

Research Question 3: *What are the evaluation mechanism in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State?*

Table 3: Mean and Standard Deviation on evaluation mechanism in maintaining quality assurance in technology education programme for employability of Instructors

		Lecturers			Instructors		
S/NO	**ITEMS**	**X**	**SD**	**RMK**	**X**	**SD**	**RMK**
1	There should be great input in curriculum development from the industry expert	3.23	.834	A	3.07	.838	A
2	In-depth development of student practical skills should be accessed with the set standard	3.40	.821	A	3.09	.808	A
3	There should be collaborative provision of employment opportunities to the student by the industry	3.09	.722	A	3.04	.947	A
4	Tools with high degree of closeness to those found in the industry should be used in the school workshop	3.18	.658	A	3.19	.766	A
5	Industrial visitation should be organized by the TVET schools so that the Instructors can reflect on the actual job practice in demand.	3.05	.924	A	3.12	.982	A
6	There should be occasional visitation of professionals and resource persons to speak on career and industrial related issues.	3.19	.953	A	3.39	.774	A
7	There should be set objectives to be achieved at the end of the practical session	2.99	.881	A	3.19	.860	A
8	There should be prompt assessment of student knowledge on the identification of appropriate tools and equipment.	2.95	.990	A	3.26	.856	A
9	There should be a proper documentation of checklist for assessment	2.98	1.033	A	3.32	.776	A
10	There should be prompt assessment of student knowledge of safety and environment.	3.19	1.043	A	3.21	.725	A
	Ground Mean	3.20	0.55	A	3.10	0.55	A

Table 3 revealed that the Lecturers had mean range of 2.95-3.40 and standard deviation of 0.65-1.04 while the Instructors had mean range of 3.04-3.36 and standard deviation of 0.72-0.98. The closeness of the standard deviation shows the homogeneity of the respondents. They all agreed that evaluation mechanism are needed in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

Statistical Test of Hypothesis

H_{O1} There is no significant difference between the mean responses of Lecturers and Instructors on school-industry mechanism in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

Table 4. t-test analysis on school-industry mechanism in maintaining quality assurance in technology education programme for employability of Instructors**.**

Respondents	**N**	**X**	**SD**	**P-value**	**DF**	**t-Cal**	**t-Crit**	**RMK**
Lecturers	40	3.18	0.50					
				0.05	58	-2.25	1.96	Sig
Instructors	20	2.97	0.62					

Result in table 4. revealed that t-cal (-2.25) is higher than t-crit (1.96) which indicates that the hypothesis stated was rejected. Therefore there is a significant difference between the mean responses of Lecturers and Instructors on school-industry mechanism in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

H_{O2} There is no significant difference between the mean responses of Lecturers and Instructors collaboration mechanism in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

Table 5: t-test analysis on collaboration mechanism in maintaining quality assurance in technology education programme for employability of Instructors**.**

Respondents	**N**	**X**	**SD**	**P-value**	**DF**	**t-Cal**	**t-Crit**	**RMK**
Lecturers	40	3.29	0.50					
				0.05	58	-2.32	1.96	Sig
Instructors	20	3.10	0.51					

Result in table 5: revealed that t-cal (-2.32) is higher than t-crit (1.96) which indicates that the hypothesis stated was rejected. Therefore there is a significant difference between the mean responses of Lecturers and Instructors collaboration mechanism in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

H_{O3} There is no significant difference between the mean responses of Lecturers and Instructors evaluation mechanism in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

Table 6: t-test analysis on evaluation mechanism in maintaining quality assurance in technology education programme for employability of Instructors**.**

Respondents	**N**	**X**	**SD**	**P-value**	**DF**	**t-Cal**	**t-Crit**	**RMK**
Lecturers	40	3.20	0.55					
				0.05	58	-3.44	1.96	Sig
Instructors	20	3.10	0.55					

Result in table 6: revealed that t-cal (-3.44) is higher than t-crit (1.96) which indicates that the hypothesis stated was rejected. Therefore there is a significant difference between the mean responses of Lecturers and Instructors evaluation mechanism in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

DISCUSSION OF FINDING

The findings of the study revealed that school-industry mechanism are needed for maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State. The finding of the study is in accordance with Lester, (2020) who stated that the integration of school-industry mechanisms is crucial for maintaining quality assurance in technology education

programs, ensuring they meet the evolving demands of the job market and enhance employability. By fostering partnerships between educational institutions and industry stakeholders, schools can align curricula with current industry standards, incorporate practical skills, and provide students with relevant, real-world experiences. For instance, industry partnerships can facilitate internships, guest lectures, and collaborative projects, bridging the gap between theoretical knowledge and practical application (Lester, 2020; Brown & Hesketh, 2004). These collaborations not only enhance the relevance and quality of the educational content but also help institutions to adapt rapidly to technological advancements and changing job requirements (Hager & Holland, 2006). Consequently, such mechanisms play a pivotal role in preparing students for successful careers in technology sectors.

The findings of the study revealed that collaboration mechanism are needed for maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State. The finding of the study is in accordance with Nicol & Macfarlane-Dick, (2006) who explained that collaboration mechanisms between educational institutions and industry are essential for maintaining quality assurance in technology education programs, directly impacting student employability. Effective collaboration ensures that curricula are continually updated to reflect the latest industry standards and technological advancements, thereby aligning educational outcomes with employer expectations. This partnership facilitates various practices such as curriculum co-design, where industry experts provide input on course content, and experiential learning opportunities like internships and co-op programs, which give students practical experience and industry exposure (Nicol & Macfarlane-Dick, 2006; Tynjälä, 2008). Additionally, regular feedback from industry partners helps educational institutions identify skills gaps and adjust training methods accordingly, thus improving the relevance and effectiveness of educational programs (Gibson, 2004). Such collaborative efforts not only enhance the quality of education but also significantly boost graduates' readiness for the workforce, bridging the gap between academic preparation and industry needs.

The findings of the study revealed that evaluation mechanism are needed in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State. The finding of the study is in accordance with Pillai et al., (2015) who asserted that an effective evaluation mechanism is critical for maintaining quality assurance in technology education programs, as it ensures that educational practices and outcomes meet the evolving demands of the job market and enhance student employability. Regular and systematic evaluations, including both formative and summative assessments, help institutions monitor the effectiveness of their programs, identify areas for improvement, and make data-driven decisions. These evaluations often involve feedback from stakeholders such as students, alumni, and industry partners, which provides insights into the relevance of the curriculum and the preparedness of graduates for employment (Pillai et al., 2015; Harvey, 2001). Furthermore, the integration of performance metrics and benchmarking against industry standards allows institutions to align educational objectives with current job market requirements, thereby improving the quality of education and the employability of graduates (Boud & Falchikov, 2006). Hence, robust evaluation mechanisms are essential for continuous program improvement and ensuring that graduates possess the skills and knowledge needed in the technology sector.

Summary of Findings

The findings of the study revealed that school-industry mechanism are needed for maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

The findings of the study revealed that collaboration mechanism are needed for maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

The findings of the study revealed that evaluation mechanism are needed in maintaining quality assurance in technology education programme for employability of Instructors in Universities in Rivers State.

CONCLUSION

Sustainability mechanisms play a crucial role in maintaining quality assurance in technology education programs at universities, ensuring long-term effectiveness and relevance in preparing students for employability. These mechanisms involve integrating sustainable practices into curriculum design, faculty development, and resource management to adapt to evolving industry needs and technological advancements. By incorporating sustainability principles, such as continuous curriculum updates and industry partnerships, universities can ensure that programs remain current and responsive to job market demands. Additionally, embedding sustainability in program evaluation processes helps institutions monitor and refine educational practices over time, promoting continuous improvement and resilience. This approach not only enhances the quality of education but also equips students with the skills necessary for sustainable and adaptable careers in technology fields.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made

1. **Integrate Sustainable Practices into Curriculum Design**: Develop and continuously update curricula to incorporate sustainability principles and current industry practices. This ensures that the content remains relevant and aligns with the latest technological advancements and job market demands. Courses should include elements that address both environmental sustainability and technological innovations.
2. **Promote Continuous Professional Development for Faculty**: Implement ongoing training programs for faculty to keep them informed about emerging technologies and industry trends. This professional development should include workshops, conferences, and collaborations with industry experts to enhance teaching methods and ensure that instructors deliver up-to-date and relevant content.
3. **Establish Industry Partnerships and Collaborative Projects**: Foster strong relationships with industry partners to provide students with practical experiences and insights into real-world applications. Collaborative projects, internships, and industry-led workshops help bridge the gap between academic learning and industry requirements, enhancing students' employability.

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