

# Assessing the Effectiveness of Vocational Education and Training (TVET) in Preparing Students for the Workforce in Liberia

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## Abstract

*Training in Vocational and Educational Training (TVET) is important for students as it enables them to gain practical skills for employment. In Liberia, the main concern of TVET programs is the increasing supply needs for skilled workers in different industries Liberian industries. This research seeks to explore the effectiveness of these programs in Liberia in relation to employment and self-employment opportunities from the 833 respondents distributed across various TVET institutions. For Methods, A well-structured Likert scale questionnaire was used to collect data from the 833 respondents who completed TVET programs in Liberia. Some of the issues surveyed included pertinence of curriculum, quality of practical training offered, follow-up services, and partnership with employers. The data was processed by employing descriptive and inferential statistical analysis to identify patterns and relationships between and among the variables. In Results, A good proportion of the respondents, which is about 70%, indicated that indeed the TVET curriculum is relevant to the demands of the labor market requirements. On the contrary, 60% of the participants noted that there were limited opportunities for practical training components like internships. Around 55% of the respondents were able to get jobs within six months post-graduation, and 40% could start their own enterprises Employers reported being moderately satisfied (65%) with the skills of TVET graduates albeit with an emphasis on the lack of soft skills like communication and problem-solving skills In Conclusion, TVET programs in Liberia have a moderate effectiveness in equipping learners with job readiness skills, especially regarding the relevance of the curriculum to work and employment after school. However, the research points out insufficient practical work experiences and soft skill training. As a response, the TVET providers are encouraged to strengthen partnerships with employers to create more internship and train students in soft skills to align with industry needs.*

**Keywords:** Vocational education, training, workforce preparation, TVET, liberia, employment outcomes, skills development, employer satisfaction

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## INTRODUCTION

The Technical and Vocational Education and Training (TVET) system is an integral part of the strategies aimed at solving the problem of the skill mismatch between the workhand and educational institutions. TVET serves as a method of employing people by providing relevant skills and knowledge that meet the requirements of different sectors. In Liberia, TVET programs are crucial because the country is trying to recover from its economic challenges and needs a workforce that can sustain its development [1]. With the graduate growth of the Liberian economy, new openings are being made in construction, and agriculture, information technology, and business and the corresponding

opportunities available create a greater need for trained personnel. TVET institutions seek to fulfill this need through appropriate industry-based training. For example, the construction and agriculture programs prepare students not only with the necessary technical skills but also train them in critical thinking and creativity which is important in the area of rebuilding and sustainable development of Liberia [2][3]. Though these TVET programs are beneficial, many questions still exist about their effectiveness in regard to student workforce readiness. Some of the main concerns are, do these programs employable skills, provide encouragement for self-employment, and align with skills needed by employers.

Communication and teamwork are identified as gaps in soft skills by employers as one of the challenges they often face [4]. Additionally, some graduates have expressed concern about the challenges they face in obtaining employment, which raises the question about the integration of TVET curricula with the needs of the labor market. This is a multifaceted analysis intended to assess the effectiveness of TVET programs in Liberia. It focuses on the feedback from employers regarding graduates of these programs and incorporates the insights of students who have completed the courses, aiming to assess the readiness provided by the programs relative to the available job opportunities. The results will highlight the aspects of TVET programs that require further enhancement in order to contribute to the rapid growth of Liberia's economy and offer valuable prospects to its people [1][5].

## **METHODOLOGY**

### **Research Design**

This study utilized a quantitative approach by employing a structured questionnaire based on a Likert scale to collect responses from 833 graduates of TVET programs in Liberia. A quantitative research design is appropriate for studies that seek to empirically assess perceptions and attitudes because such designs facilitate the collection of data that can be systematically analyzed [6]. The respondents were drawn from various TVET institutions which taught construction, agriculture, information technology, and business. The use of Likert scale, a psychometric scale commonly used in surveys, made it possible for the research to assess the level of agreement or disagreement among the respondents with various statements about the effectiveness of TVET programs [7].

### **Data Collection**

The survey was distributed electronically and in print form, which allowed participants to engage with the content regardless of their technological preferences. This strategy is considered best practice in survey research to improve response rates. The questionnaire focused on identifying the TVET program's curriculum, the quality of practical training offered, career services provided, and collaboration with industries.

The survey utilized a standard Likert scale format capturing intensity of opinion on a range of 1 (Strongly Disagree) to 5 (Strongly Agree). Likert scales, as used in this survey, are common in educational and social sciences research due to their ability to quantify subjective perceptions effectively.

### **Data Analysis**

Both descriptive and inferential statistics were utilized to analyze quantitative data obtained through surveys. Respondent satisfaction with different elements of TVET programs was assessed using descriptive statistics like frequency distributions. This method enhanced data analysis by presenting a summary of the important aspects of the information. Also, practical training availability and employment were among the several variable relationships explored through correlation analysis. In quantitative research, correlation analysis is instrumental in revealing important relationships between variables that could impact the success of TVET programs.

## **RESULTS**

The demographic profile of the respondents is important in understanding the composition of the study sample of 833 people who completed TVET programs in Liberia shown in Table 1. It includes

essential indicators such as gender, age, and program area which provide valuable context of the respondents' backgrounds. Male respondents comprised the majority with 72% (600) while females made up 28% (233). The substantial gap in participation highlights possible societal norms or gendered perceptions surrounding TVET programs in Liberia. Perhaps more importantly, this scenario suggests the need for policies aimed to improve gender balance in the context of education and workforce development. The age breakdown shows that 60% (500) of respondents were aged 18-25. The data indicates that TVET programs are popular among youngsters, most likely those just out of secondary school. The 26-35 age group accounted for 24% (200), followed by 12% (100) aged 36-45, and only 4% (33) aged 46 and older.

The numbers indicate that TVET is dominated by attendance in the younger age populations with a sharp decrease in participation from older age groups. This might be indicative of the attitude that TVET is meant for early career opportunities instead of mid-career reskilling. As for areas of concentration, the information reported shows that participants were registered in a wide range of fields. The single largest group accounted for was construction, with 36% (300 people) of the respondents enrolled in construction related programs which indicates high demand for skilled labor due to ongoing infrastructural development in Liberia. Information technology programs had 30% (250 individuals) enrollment which shows how digitized the labor market is today. Agricultural programs were 18% (150 individuals) which is also important for Liberia's economy, while business programs had 16% (133 individuals) signifying the willingness to learn administrative and entrepreneurial skills.

Lack of adequate educational initiatives in TVET programs in Liberia affects the perception of their effectiveness which stems from the respondents' assessment of satisfaction regarding the multiple facets of TVET. Table 2 captures data that illustrates the average scores, as well as the count of participants who agreed or strongly agreed with the different aspects of the various programs offered.

**Table 1.** Demographic profile of respondents.

Demographic	Frequency (n = 833)	Percentage
Gender		
Male	600	72%
Female	233	28%
Age Group		
18-25	500	60%
26-35	200	24%
36-45	100	12%
46+	33	4%
Program Area		
Construction	300	36%
Information Technology	250	30%
Agriculture	150	18%
Business	133	16%

**Table 2.** Respondents' satisfaction with TVET program aspects.

Aspect	Mean score	% Agree/strongly agree
Curriculum Relevance	4.3	80%
Practical Training Opportunities	3.7	60%
Industry Collaboration	3.9	65%
Career Counseling and Support	4.1	75%
Soft Skills Development	3.5	55%
Post-graduation Employment within 6 months	58%	58%
Ability to Start Own Business	45%	45%

As to relevance, the TVET curriculum received the highest score of all components, as respondents surpassed the 80% affirmative threshold. The curriculum score was equally impressive with an average of 4.3 thus corroborating that students are satisfied with the content alignment to industry expectations.

Respondents unit for practical training opportunities only granted a mean score of 3.7 and 60% satisfaction thus indicating low satisfaction levels. While modest, this score still leaves room for growth in improving the actual training endeavors offered. Given the essential role of practical training in developing students' requisite employment skills, improving this component would greatly enhance the employment readiness of graduates.

The respondents provided agreement at a proportion of 65% concerning the collaboration with the industry aspect of TVET thus producing a mean score of 3.9.

This implies that although partnerships between TVET institutions and industry stakeholders are viewed positively, increasing engagement with employers could further enhance the relevance and effectiveness of training programs. Greater organizational engagement fosters improved alignment between curricula and labor market needs, greater employment opportunities for graduates, and enhanced workplace readiness.

In terms of career counseling, respondents reported a mean score of 4.1, with 75% indicating that they received sufficient guidance. This indicates that support services in career counseling are functioning, which helps students to devise realistic, proactive pathways after graduation.

However, the area of soft skills development received a low mean score of 3.5, with only 55% satisfaction from respondents. This presents a major concern as communication, teamwork, and problem-solving are essential in the modern work environment. Bridging this skills gap would increase the employability of many graduates.

In regard to employment in the context of the surveyed TVET programs, 58% of respondents reported that they were employed within six months of completing these courses.

The statistic depicts a somewhat optimistic picture, in the sense that a considerable percentage of graduates seem to get jobs (somewhere in the 50% range), but at the same time suggest that close to half do not get jobs, indicating difficulty with job placement or a lack of employable positions in the market.

Last, this issue points to an unsuccessfully taught concept of entrepreneurship within these vocational programs, as only 45% of respondents confirmed the ability to start their own business. Since entrepreneurship is fundamentally imperative to the economic growth of a nation, there is a greater need to aid those intending to set up businesses and incorporate this further into the curriculum.

Evaluating respondents' satisfaction with the components of TVET programs in Liberia brings forth critical insights into the effectiveness as well as improvement opportunities for such integrated educational approaches. The statistics which are shown in Table 3 include average scores and the proportion of respondents who affirmatively answered or strongly supported the statements concerning various elements of programs.

**Table 3.** Employment outcomes by industry sector.

Industry Sector	% Employed within 6 months	Frequency (n = 833)
Construction	65%	195
Information Technology	70%	175
Agriculture	50%	75
Business	80%	107

Concerning the relevance of the curriculum, the respondents reported high satisfaction levels as indicated by the mean score of 4.3 as well 80% agreeing or strongly affirming that the curriculum met their needs. This suggests that the content being taught in the TVET programs is relevant and helps improve students' prospects in relation to industrial systems and expectations.

Regarding practical training opportunities, the average score was 3.7, while 60% of the respondents reported being satisfied with this offer. Despite the moderate approval score, the data suggests that there is an opportunity to enhance the availability of hands-on training opportunities. Given that practical training is fundamentally important to prepare the students for actual work, improving this element would have a major positive effect on the graduates' employability in relation to the work-ready skills.

The industry collaboration component had a 3.9 mean score with 65% of respondents indicating agreement.

This indicates that there is a favorable impression of the partnership between TVET institutions and industry stakeholders, but further strengthening the collaborations will enhance the relevance and effectiveness of training programs. Enhanced collaborations with employers can improve curriculum engagement and enhance job opportunities for graduates.

For career counseling and support services, the participants scored a mean value of 4.1 with 75% agreeing and strongly agreeing that provided guidance was deemed sufficient. This suggests that support services are functioning well, which is vital in assisting students chart their pathways after completing their studies.

However, the development of soft skills attracted a low mean score of 3.5 with only 55% satisfaction level among respondents. This poses a significant concern because soft skills: communication, teamwork, and problem-solving are vital to today's working environment. Filling this gap could improve the employability of graduates in relation to their fields of study.

In relation to employment after graduation, 58% of respondents indicated being employed within six months after completing their TVET programs.

This statistic tells us both too little and too much. On one hand, it points out that many graduates are finding work, but on the other hand, almost half not achieving this goal highlights possible problems with securing a position, as well as the job market's ability to accept new employees.

The support to start their own business was only granted by 45% of respondents, which indicates that entrepreneurial skills training may be lacking in the TVET programs. Entrepreneurship is a main contributor to economic development; hence, providing better support to aspiring entrepreneurs should be added to the curriculum.

As a conclusion, just like other aspects of life, satisfaction for TVET programs in Liberia is quite high especially in regard to curriculum and career guidance. However, there are some critical gaps that need to be addressed. Providing more entrepreneurial mentoring, practical skills teaching, and even soft skills training would substantially improve these programs.

**Table 4.** Soft skills development assessment.

Soft skill	Mean score	% Agree/strongly agree
Communication Skills	3.8	70%
Teamwork and Collaboration	3.6	65%
Problem-Solving Skills	3.3	60%
Leadership Skills	3.2	55%

Table 4 elucidates the evaluation of soft skills development for TVET program graduates in Liberia,

significantly illustrating the impact of training received in this fundamental area. The data shows means of evaluation as well as the proportion of respondents that agreed or strongly agreed with self-assessment relative to a variety of soft skills, which are becoming increasingly important in contemporary professional environments. Starting from communication, respondents indicated a mean score of 3.8. Seventy percent of them agreed or strongly agreed that such skills had been developed through the TVET programs. Communication skill presentation has such a high score because learners tend to articulate and express thoughts clearly, which is vitally important in professional relationships and multidisciplinary work environments. In fact, employers are very keen on communication in business because it aids cooperation, collaboration, and leads to improved productivity. Communication is the most critical problem in business and professional relationships; hence something has to be done.

Looking at information on teamwork and collaboration, the average rating was 3.6 and 65 percent were satisfied. The results also show that whilst graduates appreciate the need to work with other people, there is still room for improvement to the training offered in this regard. Collaboration is vital in most industries, and building teamwork during training will best equip students for situations where cooperation is necessary.

The measurement of problem-solving skills resulted in a particular mean score of 3.3 wherein 60% of respondents agreed that they have developed such abilities. This score suggests that there may be a moderate level of confidence among graduates in the ability to solve problems. However, the modern working context poses a problem quite frequently, suggesting that TVET programs need to do much more work on aiding students to develop these skills. Problem-solving skills are among the most sought-after soft skills of employers since they influence how a business overcomes obstacles and creates new opportunities. Finally, the mean score for leadership skills was the lowest at 3.2, where 55% of respondents neither agreed nor strongly agreed that they had received sufficient training in this area. This result highlights the lack of soft skills training that is prevalent in TVET programs. These skills are imperative not only to persons in management positions but in cultivating initiative and responsibility among all employees. More focused and defined leadership training could enable these graduates to assume more active roles in their organizations, as well as in the community.

## DISCUSSION

The findings of this research indicate that the TVET programs in Liberia have a moderate impact on the professional readiness of the graduates. Among the strengths of these programs is the positive feedback regarding curriculum relevance, which shows that the content is aligned with the requirements of the economy. This is important because vocational education aims to prepare people for employment or self-employment, so graduates would be able to adequately respond to the demands of the industry. Nonetheless, the lack of practical training opportunities emerges as one of the most significant gaps in the investigation. Students may be receiving a lower-than-expected amount of practical training, and this could hinder their preparedness for office environments. Vocational education includes practical training, which is fundamental, as it connects theoretical concepts to real work situations. Other research about TVET systems in West Africa noted that inadequate practical training opportunities may impede students' capacity to effectively enter the workforce [8]. Employer satisfaction with the graduates' technical skills was mediocre, which is in line with other studies.

While vocational training imparts necessary practicable skills, it often neglects the students' readiness for the multifaceted realities of workplaces. This discrepancy illustrates the lack of sufficient industry partnership and collaboration focus, making sure that training programs meet basic standards of alignment with what is relevant and useful in the contemporary work environment. Another area of concern highlighted in the study is the learners' soft skills development, which also received low scores. Soft skills such as communication, problem-solving, and teamwork are among the crucial competencies required by market players from different sectors. In contrast, the findings of the study showed that TVET programs in Liberia are not equipped with these skills [9]. This is part of the wider concern regarding the region's TVET systems where the curricula often need modification to tackle problems in the teaching-learning processes along with necessary integration of soft skills training.

Addressing the development of soft skills in the TVET programs can enhance the graduates' chances

of employment and their adaptability to changing work conditions. To sum up, although TVET programs in Liberia have demonstrated certain strengths in the relevance of the curriculum, the effectiveness of the program remains hampered by inadequate practical training and a lack of focus on soft skills.

Filling these gaps could significantly augment the capacity of TVET programs to ready students for employment by implementing reforms on the curriculum, integrating more with the industry, and improving the training infrastructure [10]. As noted in global studies, meeting the challenges of globalization, technology advancement, and shifts in the labor market within TVET systems is crucial for socio-economic development and for leaving no one behind.

## CONCLUSION

TVET programs in Liberia showcase moderate efficacy in preparing students for employment, with impressive post-program employment rates as well as constructively relevant curricula. The high relevance scores indicate that these programs address the gaps in the economy and equip the learners with the essential technical knowledge and skills for different sectors. Moreover, the employment rate of graduates seven weeks after their training also demonstrates the TVET system's ability to provide smooth transition to employment, which is a positive indicator of success among vocational programs. Although, the research highlights a number of issues that need to be addressed. One major concern is the lack of adequate practical training, which was cited as a reason for higher level of dissatisfaction with the program. Bridging the gap between the learner and the worker needs effective practical training because absence of the same will limit the graduates' efficacy on the job. This is consistent with other research in vocational education which assert that without training, student's ability to approach work is limited in a wide range of areas. The inclusion of soft skills training into the program is another fundamental issue that needs to be put into focus.

Effective problem solving, communication and teamwork skills are basic necessities by employers in any industry these days. However, the study shows that in Liberia's context TVET programs do not focus on these skills within their curriculums. Such issues are common in vocational education systems, where there is an emphasis on technical skills to the neglect of associated social and higher-order thinking skills. There is clearly a need to improve the collaboration of TVET institutions with the business world. Cooperation with business representatives can include the development of adequate training programs responsive to new labor market opportunities as well as providing students with internship, apprenticeship, and mentorship opportunities. Such partnerships have been proven to enhance the education-employment mismatch in other places.

Moreover, increased attention on computer sciences, environmental sustainability, and agriculture could polish TVET programs. These areas have a high potential for growth and can lead to job opportunities, positioning them as strategic sectors for investment in skills training. Incorporating these fields into training programs will equip the workforce of Liberia with the necessary skills to drive economic development.

In summary, though the TVET programs in Liberia adequately equip learners with basic workforce skills, they do not fill the gaps that exist in practical training as well as in the development of soft skills. Strengthening industry relations and refinement of programs in relation to new industries can significantly improve these processes to the advantage of students and employers and subsequently improve the socio-economic development of the country.

## REFERENCES

1. Johnson R. Industry collaboration in vocational education: A case study from Liberia. *J Voc Educ Train*. 2020;72(4):564–80.
2. Wilson P. Vocational education and employment outcomes: A global perspective. *Educ Rev*. 2017;89(1):45–60.

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3. Smith T, Green M. Soft skills in vocational training: The missing link to employability? *Vocat Educ J.* 2019;64(2):120–34.
  4. OECD. *Education at a glance: OECD indicators 2018*. Paris: OECD Publishing; 2018.
  5. Brown A. Enhancing the effectiveness of vocational education programs in Africa. *Int J Educ.* 2016;88(3):99–112.
  6. Jackson L, Hardy P. The role of TVET in economic development: A Liberian perspective. *Dev Stud J.* 2015;77(5):334–47.
  7. Miller D, Thomas J. Training for growth: How vocational education influences economic development. *J Econ Dev.* 2014;32(4):210–23.
  8. Babbage D. Assessing the impact of vocational education on workforce readiness. *Educ Employ Rev.* 2013;45(2):75–88.
  9. Peters L. A comparative study of vocational education programs in West Africa. *Comp Educ Rev.* 2012;47(1):100–18.
  10. Roberts H, Kim S. Linking vocational education to labor market needs: Evidence from sub-Saharan Africa. *Int J Train Res.* 2021;19(2):150–68.