



## Relationship Between Training Pedagogy and Students' Acquisition of Employable Skills at Technical and Vocational Education and Training Institutions

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**ABSTRACT:** Effective teaching pedagogy is critical for acquiring employable skills in Technical and Vocational Education and Training (TVET) institutions. A good pedagogy fosters innovation and transforms lessons into trainee-centered activities, thereby enhancing skill acquisition. This study examines the relationship between training pedagogy and acquiring employable skills among students in Technical and Vocational Education and Training (TVET) institutions. It highlights how various pedagogical approaches, including competency-based education and dual training systems, contribute to the development of practical and technical skills necessary for the labor market. The findings reveal that trainers' qualifications, including industrial attachments, positively influence skill transfer, although limited participation in professional development programs and gaps in infrastructure hinder optimal outcomes. The study highlights the importance of aligning training methodologies with industry requirements through enhanced collaboration between stakeholders. It also emphasizes the need for increased investment in infrastructure and teaching resources, alongside integrating soft skills into training curricula to ensure holistic employability. This research provides actionable insights for policymakers, educators, and industry leaders to improve TVET systems and prepare graduates for dynamic work environments.

### INTRODUCTION

Training pedagogy plays a pivotal role in shaping students' employable skills in Technical and Vocational Education and Training (TVET) institutions. A pedagogical approach emphasizing experiential learning, such as project-based and competency-based training, has been shown to enhance the acquisition of practical skills relevant to the labor market. Studies highlight that hands-on methodologies, coupled with industry-linked internships and apprenticeships, enable students to translate theoretical knowledge into real-world applications (Oketch, 2017). Furthermore, incorporating technology-based learning tools, such as virtual simulations and e-learning platforms, equips students with digital competencies that are increasingly in demand across various industries (UNESCO, 2020). These methodologies align with the requirements of employers seeking candidates with problem-solving capabilities, adaptability, and technical proficiency.

Equally important is the role of instructors in fostering skill acquisition through effective pedagogy. Research suggests that instructors who adopt learner-centered approaches, encouraging active participation and critical thinking, contribute significantly to students' skill development (Nyerere, 2018). TVET institutions that facilitate continuous professional development for trainers ensure the use of updated teaching techniques aligned with industry needs. Moreover, the integration of soft skills training—such as communication, teamwork, and decision-making—within technical courses further enhances the employability of graduates (World Bank, 2019). The synergy between innovative pedagogy and industry collaboration ensures that students graduate with a competitive edge in the job market, bridging the gap between education and employment.

The choice of teaching pedagogy significantly influences the effectiveness of skill acquisition in TVET institutions. Innovative, trainee-centered teaching methods that simulate real-world manufacturing processes are vital for practical skill development (Okoye, 2010; Yinusa, 2014). However, in many cases, trainers tend to prioritize theoretical over practical aspects, which undermines the ability of students to acquire employable skills. This study explores the teaching strategies employed in TVET institutions and their impact on students' ability to acquire market-relevant skills, focusing on insights from Kenya and other African contexts.



The growing demand for a skilled labor force necessitates a reevaluation of pedagogical approaches in vocational education. Globally, nations such as Germany and South Korea have embraced practical and context-driven teaching methods that align closely with industry needs. These approaches not only improve skill acquisition but also ensure that graduates are work-ready and capable of meeting labor market demands. Conversely, in developing nations, resource constraints and outdated teaching methodologies often hinder the effectiveness of vocational training, leaving students ill-prepared for employment.

In Kenya, TVET institutions play a pivotal role in bridging the skills gap and addressing youth unemployment. However, the prevalent use of lecture-based and teacher-centered methods limits the ability of students to engage with practical learning experiences. This challenge is compounded by inadequate resources, large class sizes, and a lack of modern training equipment. Addressing these barriers requires a shift towards innovative, hands-on teaching strategies that prioritize student engagement and practical skill development. By examining the relationship between training pedagogy and employable skills acquisition, this study seeks to provide actionable recommendations for improving vocational education in Kenya.

## Problem Statement

While numerous studies have examined the role of training pedagogy in enhancing employable skills, gaps remain in understanding its nuanced impact within diverse socioeconomic and technological contexts. Much of the existing literature focuses on generalized outcomes of competency-based and experiential learning approaches without addressing the variability in effectiveness across different regions, industries, and levels of technological integration (Oketch, 2017; UNESCO, 2020). Furthermore, limited research explores how the interplay between instructors' professional development and institutional resource availability affects pedagogical efficacy in TVET institutions. The integration of soft skills training, though acknowledged, is often treated as an ancillary component rather than a core focus, leaving unanswered questions about its long-term influence on employability (World Bank, 2019). Additionally, studies rarely capture the perspectives of employers and graduates in assessing the alignment between training methods and workforce demands. This gap calls for more localized and stakeholder-inclusive research to provide actionable insights for bridging the education-employment divide.

## Objectives

1. To identify the teaching strategies commonly employed in TVET institutions.
2. To assess the effectiveness of these pedagogies in enhancing the acquisition of employable skills.
3. To recommend appropriate trainee-centered pedagogies that improve practical skill acquisition.

## LITERATURE REVIEW

The acquisition of employable skills among students in Technical and Vocational Education and Training (TVET) institutions is a critical focus for fostering economic growth and addressing skills mismatches in the labor market. Training pedagogy, defined as the strategies and methods employed in teaching, significantly influences the effectiveness of skill transfer from instructors to students. This literature review explores various dimensions of the relationship between training pedagogy and the acquisition of employable skills, highlighting theoretical frameworks, practical applications, and gaps in existing research.

One of the most widely discussed pedagogical approaches in TVET is competency-based education and training (CBET). CBET emphasizes skill mastery over time-based learning, aligning education outcomes with industry standards and job requirements. Oketch (2017) argues that this approach is particularly effective in bridging the gap between theoretical knowledge and practical application, as it prioritizes hands-on learning experiences. Additionally, project-based learning (PBL) has gained traction in TVET institutions, encouraging students to engage in real-world problem-solving tasks that mirror workplace challenges (UNESCO, 2020). These methods not only enhance technical proficiency but also foster critical thinking and adaptability key traits for employability in dynamic industries.

Another effective strategy is the integration of dual training systems, where students alternate between classroom instruction and on-the-job training through apprenticeships and internships. Such systems ensure that students acquire both technical skills and workplace competencies (Nyerere, 2018). For example, Germany's dual education model has been lauded globally for its success in preparing students for employment, demonstrating the importance of structured collaboration between educational institutions and industries.



The role of instructors in TVET pedagogy cannot be understated. Instructors serve as the primary facilitators of skill acquisition, and their teaching methods directly impact student outcomes. Research by Nyerere (2018) highlights the effectiveness of learner-centered pedagogies, which prioritize active participation, collaboration, and individualized feedback. Such approaches help students internalize technical concepts and develop problem-solving capabilities essential for the modern workforce.

Continuous professional development (CPD) for instructors is another critical factor. Studies indicate that many TVET trainers lack industry-relevant skills, which limits their ability to deliver up-to-date and practical training (World Bank, 2019). Investment in CPD programs ensures that instructors remain current with technological advancements and pedagogical innovations. For instance, integrating digital tools like simulations, e-learning platforms, and virtual labs has become essential for preparing students for digitized workplaces.

While technical skills are the cornerstone of TVET education, the inclusion of soft skills in training pedagogy is equally important for holistic employability. Soft skills such as communication, teamwork, and emotional intelligence enable students to adapt to diverse work environments and enhance their professional interactions. According to a study by UNESCO (2020), TVET institutions that embed soft skills training within their curricula report higher employability rates among graduates. However, the challenge lies in striking a balance between technical and non-technical training, as time and resource constraints often lead to an overemphasis on technical competencies.

Okoye (2010) highlights that effective vocational education pedagogy must prioritize innovation and trainee-centered activities. Yinusa (2014) adds that training methods should replicate real-world manufacturing processes to enhance practical learning. However, studies in Nigeria by Akpomudjere (2019) and Ovwiroro (2019) reveal that the predominant use of lecture methods in vocational education programs has hindered skill acquisition. These studies recommend the adoption of demonstration and practical-oriented strategies.

Odo (2012) provides a contrasting view, reporting that Nigerian vocational education trainers frequently employ demonstration, field trips, project experiments, and assignments, all of which are effective in teaching practical subjects. Similarly, Tumba and Shuaibu (2016) identify demonstration, apprenticeship, and assignment-based approaches as suitable for augmenting employable skill acquisition. Audu (2014), in a study conducted in Ghana, emphasizes that methods such as field trips, context-based learning, work-based learning (attachments), and project-based problem-solving are instrumental in skill acquisition. These findings demonstrate the value of diverse, context-specific pedagogies in vocational training.

Sang, Muthaa, and Mbugua (2012) note that Kenyan TVET trainers predominantly use the lecture method, which is theory-based and teacher-centered, limiting its effectiveness in equipping students with practical skills. Karemu and Gongera (2014) and Changilwa (2016) argue that TVET's relevance has diminished due to outdated facilities and deficient training equipment, which adversely affect pedagogical choices. However, Mwaura and Mwangi (2015) report that trainers in automotive diploma programs adopt a combination of demonstration, project work, and lectures, ensuring quality training despite challenges such as inadequate resources. Anindo (2018) similarly found that most instructors in Nairobi City County combine lecture, demonstration, and discussion methods, even in the face of overcrowded classes and poor equipment.

## THEORETICAL FRAMEWORK

This study is anchored on Constructivist Learning Theory, which emphasizes that learning is most effective when students actively participate in constructing their knowledge through hands-on experiences. Trainee-centered pedagogies such as demonstration, project work, and problem-solving align with this theory by promoting practical engagement and critical thinking.

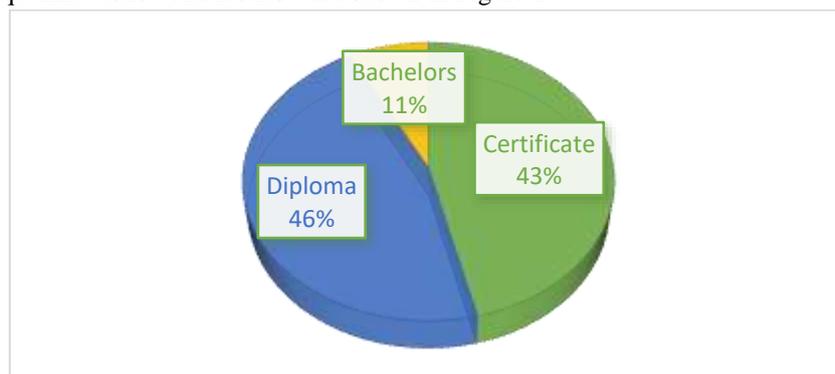
## METHODOLOGY

The study employs a descriptive research design to examine the relationship between training pedagogy and skill acquisition in TVET institutions. Data were collected through structured questionnaires distributed to TVET trainers and students. Additionally, focus group discussions and classroom observations were conducted to evaluate the pedagogical approaches used. Stratified random sampling ensured the inclusion of diverse TVET institutions. Data analysis involved both quantitative and qualitative methods, with statistical tools used to measure the correlation between teaching strategies and employable skill acquisition.

**FINDINGS AND DISCUSSION**

**Academic qualification of teachers**

The study investigated the academic qualification of trainers to determine its effects on students' acquisition of employability skills. The trainers and principals were asked to show their highest academic qualification they had attained classified as, degree, diploma, certificate, and any other qualifications. The results were shown in Figure 1.

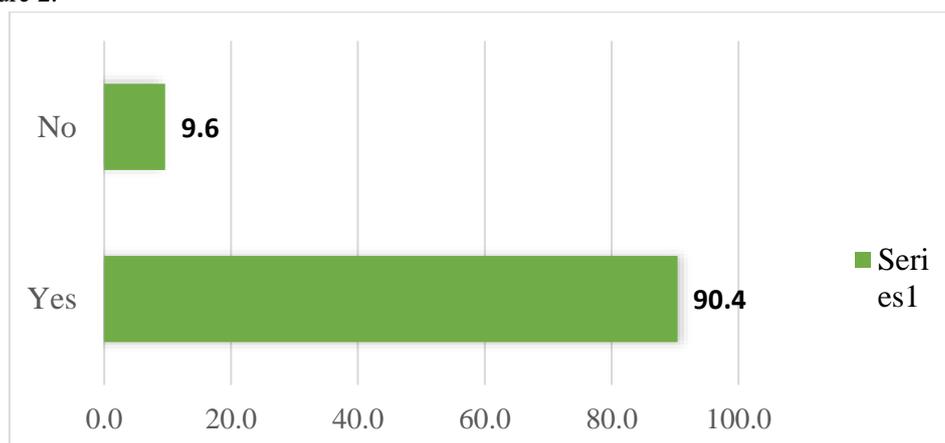


**Figure 1: Trainer's academic qualifications**

From the chart above, none of the trainers had the academic qualification of a Master's degree. The majority of teachers (46 %) had a diploma, (43 %) certificate in education, and (11%) had bachelors. This implies that the teachers were qualified for the impartation of skills among the trainees. The findings were in agreement with Yewa (2015) and Anindo (2016) whose findings indicated that the teaching staff in TVETs and vocational training centers had satisfactory qualifications.

**Industrial attachment of TVET teachers**

The study also established whether teachers had carried out industrial attachment during their pre-service training. The responses are presented in Figure 2.



**Figure 2: Industrial attachment of teachers**

Findings in figure 2 reveals that majority of the respondents (90.4 %) concurred their participation in industrial attachment and had aided their imparting employable skills in the trainees. This, therefore, allude that trainers in TVET are abreast of the modern technologies in the industries hence efficacious impartation of employable skills among trainees.

**Trainers attendance to seminars/ workshops**

The study also sought to find out how often teachers attend seminars/workshops on TVET. The responses are recorded in Table 3.

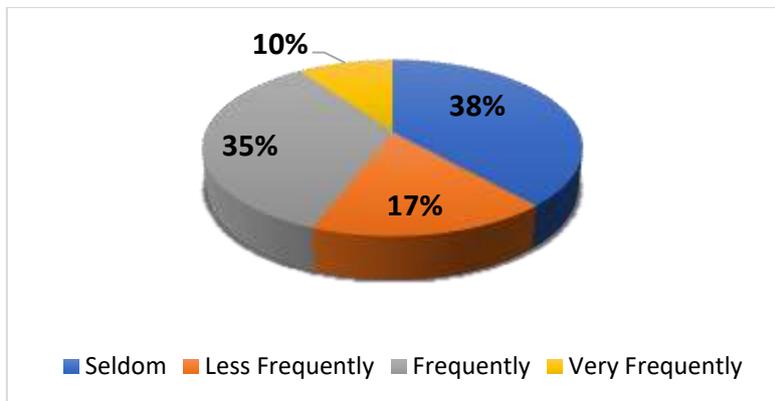


Figure 3: Trainer’s attendance to seminars

The findings in figure 3 reveal that 35% indicated that trainers attend seminars frequently, 17% of the teachers indicated that attendance to workshops is less frequent, 38% of the teachers reported that they seldom attend workshops while 10% indicated that they attend seminars very frequently. This implies that 55% of the teachers agreed that there was attendance at TVET seminars. These findings diverge with Indoshi, et al.’s (2010) and Maingi (2019) who indicated that TVET trainers had insufficient disclosure to modern technology to improve their training. Therefore, the findings infer that TVET trainers inaptly attend seminars that negatively influences students' acquisition of practical capabilities.

**Influence of trainer’s qualification on students acquisition of employable skills**

The study also aimed to find out the extent to which trainers academic qualifications influenced student's acquisition of employable skills. The responses are presented in figure 4.

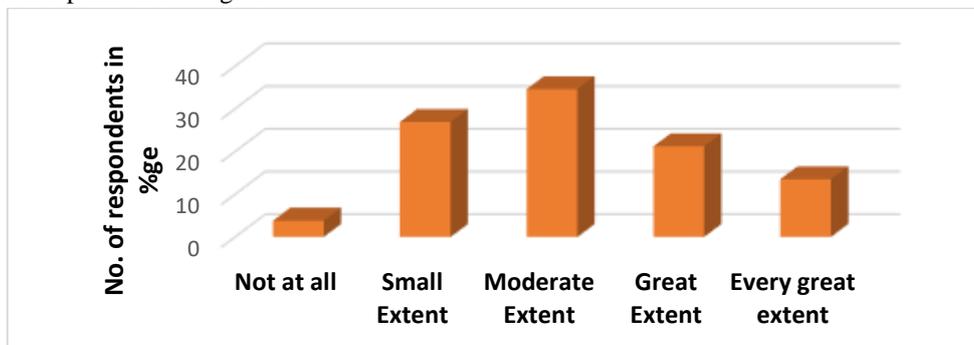


Figure 4: Influence if trainers’ qualifications on trainees acquisition of employable skills

The findings reveal that 25% of the trainers believed to a small extent that their academic qualifications had a great impact on the impartation of employable skills among students and 33% to a moderate extent. Also, 25% believed to a great extent that their academic qualifications had a high influence on the teaching, 13% believed to a very great extent while 4% did not believe at all. Therefore, the majority of teachers (71%) stated that their academic qualifications expressively on the students’ acquisition of employable skills because it aids their comprehension of the course content theoretically and practically. This implies that quality trainers tend to be creative and innovative in content delivery. Besides, if TVET and vocational training institutions teachers are not adequately trained acquisition of practical skills by trainees will be hampered exceedingly.

**Trainers responses on the level of students acquisition of employable skills**

The study also sought to find out from the trainers the extent to which they believed that the trainees and graduates have acquired the employable skills. The responses are presented in table 1.



**Table 1: Trainer’s responses on the level of student’s acquisition of employable skills**

	Not at All		Small Extent		Moderate Extent		Great Extent		A Very Great Extent	
	fre	f %	fre	f %	fre	f %	fr	f %	fre	f %
Personal Qualities	2	4.2%	13	27.1%	16	33.3%	10	20.8%	7	14.6%
Interpersonal Skills	1	2.1%	5	10.4%	16	33.3%	20	41.7%	6	12.5%
Creativity Skills	1	2.1%	8	16.7%	14	29.2%	21	43.8%	4	8.3%
Problem Solving Skills	0	0.0%	18	37.5%	6	18.5%	18	37.5%	6	12.5%
Communication Skills	0	0.0%	3	6.3%	13	27.1%	20	41.7%	12	25.0%
Basic Skills	1	2.1%	6	12.5%	10	20.8%	18	37.5%	13	27.1%
Adaptable Work Ethics	0	0.0%	4	8.3%	14	29.2%	22	45.8%	8	16.7%
Professionalism	2	4.2%	2	4.2%	3	6.3%	12	25.0%	29	60.4%

From the above findings in table 1, it can be inferred that the trainers were moderately satisfied with trainees' acquisition of relevant skills. Regarding personal qualities, 35.4% believed to a large extent while 32.2% were believed to a small extent. On creativity skills, majority of the trainers rated the acquisition to 52.1% compared to an 18.8% small extent rating. Concerning the acquisition of problem-solving skills 50.0% agreed believed that the trainees had acquired that skill, while 37.7% rated the skill acquisition to a small extent and 12.5% moderate rating. Likewise, regarding acquisition of basic skills and professionalism, the trainers were dissatisfied. It should be noted clearly that training alone cannot create jobs, but with employable skills, graduates can easily navigate the labour market by creating jobs. The findings on trainer’s dissatisfaction can be concomitant to derisory training facilities that only permit for teacher-centered approaches of training debilitating skills acquisition. The findings concur with Leka (2017) who notes that inadequate impartation of employable skills among trainees escalates youth unemployment due to mismatch in the labour market. Based on this analysis it appears that trainees had not adequately acquired employable skills in TVET and vocational institutions in Kilifi County.

**Testing the relationship between trainers’ qualifications and trainees acquisition of employable skills**

A chi-square test was carried out to find out whether the availability of training facilities and resources in TVET and vocational colleges influence trainees’ acquisition of employable skills at a significant level of 0.05 as shown in table 2.

**Table 2: Chi-square test of relationship between trainers qualifications and trainees’ acquisition of employable skills in TVET and vocational training colleges**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	77.928 <sup>a</sup>	48	.004
Likelihood Ratio	60.254	48	.110
Linear-by-Linear Association	6.690	1	.010
N of Valid Cases	95		

The results were;  $X^2(48, N=95) = 77.928, P=.004$ . Therefore, the p-value 0.004 is less than the significant level of 0.05 associated with a 95% confidence level. This implied that there is a significant correlation between teachers’ qualifications in TVET and vocational institutions and trainees’ acquisition of employable skills in Kilifi County, Kenya. The study findings were in agreement with, Ovwiroro (2019).



## CONCLUSION

The findings of this study emphasize that the qualifications of TVET trainers significantly influence students' acquisition of employable skills. Most trainers hold diplomas or certificates, which provide adequate knowledge and expertise for imparting skills. The practice of industrial attachment among trainers ensures they remain updated on technological advancements, thus enhancing the quality of training delivered. However, limited participation in professional development activities such as seminars and workshops indicates a need for consistent capacity building to align with modern pedagogical demands. Despite the qualifications of trainers, gaps in infrastructure, teaching resources, and exposure to new technologies hinder effective pedagogy. There is a need for increased investment in TVET institutions to address these challenges and improve training outcomes. Collaboration between stakeholders, including industries and policymakers, is essential to align training programs with labor market requirements and ensure graduates are adequately prepared for employment.

## RECOMMENDATIONS

From the findings presented in the document, the following recommendations can be made:

1. TVET institutions should prioritize continuous professional development by organizing regular workshops, seminars, and industrial attachment programs for trainers. These initiatives will ensure trainers stay updated with industry trends and emerging technologies, improving their capacity to impart employable skills effectively.
2. Governments and stakeholders should allocate more funding to improve training facilities, teaching materials, and technological resources in TVET institutions. Adequate infrastructure supports the implementation of learner-centered and technology-integrated pedagogical methods, enhancing the quality of training.
3. Collaboration between TVET institutions and industries should be fostered to align curricula with labor market needs. Establishing mentorship programs, internships, and dual training systems will help students gain practical experience and industry-relevant skills.
4. TVET institutions should integrate soft skills such as communication, teamwork, problem-solving, and adaptability into their training programs. These competencies are crucial for holistic employability and enable graduates to navigate diverse work environments successfully.

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