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INSTITUTIONAL CONSTRAINTS HINDERING EFFECTIVE VOCATIONAL EDUCATION DELIVERY: EVIDENCE FROM THE NASARAWA STATE VOCATIONAL AND RELEVANT TECHNOLOGY BOARD, NIGERIA, 2015-2024

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ABSTRACT

Despite operating for over two and a half decades, the Nasarawa State Vocational and Relevant Technology Board (NSVRTB) continues to face significant institutional constraints that impede the effective delivery of vocational education and training. This paper examines the nature, scope and consequences of these constraints, drawing on primary data collected from 312 ex-trainees and 24 key informants across the Board's four training centres in Lafia, Doma, Wamba and Nassarawa local government areas of Nasarawa State, Nigeria. Using a descriptive survey design complemented by key informant interviews and Simple Linear Regression analysis, the study finds that the five most critical institutional constraints are: curriculum misalignment with labour market needs; absence of entrepreneurship training; inadequate and obsolete training infrastructure and equipment; limited managerial capacity exacerbated by frequent leadership turnover; and weak industry–employer partnerships. Regression analysis confirmed that limited managerial capacity has a statistically significant negative effect on the effective provision of vocational education ($\beta = -.117$, $p = .038$). Qualitative findings further revealed that bureaucratic bottlenecks in procurement, erratic electricity supply and unstable institutional leadership compound these structural deficiencies. Anchored in Human Capital Theory, the paper argues that institutional effectiveness is a necessary precondition for vocational training to yield its anticipated labour market and entrepreneurship dividends. The study recommends curriculum modernisation aligned with industry needs, mandatory integration of entrepreneurship education, substantial infrastructure renewal, capacity building for management staff, formalisation of industry partnerships and structural reforms to reduce bureaucratic delays.

KEYWORDS: vocational education, institutional constraints, managerial capacity, Nasarawa State, Nigeria, Human Capital Theory

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INTRODUCTION

Technical and Vocational Education and Training (TVET) has been widely recognised as a strategic instrument for addressing youth unemployment, fostering entrepreneurship and accelerating socioeconomic development, particularly in developing nations where formal employment opportunities remain scarce (UNESCO, 2015; Mustajab & Irawan, 2023). In Nigeria, the persistence of unemployment especially among young people has elevated TVET to a central position in national and sub-national development policy discourse. Successive Nigerian governments have consequently established an array of vocational training institutions, skills acquisition centres and technical colleges, in an effort to equip citizens with productive competencies relevant to the labour market.

Nasarawa State, created from Plateau State on 1 October 1996 and situated in the North-Central geopolitical zone of Nigeria, faces significant developmental challenges including high youth unemployment. Official statistics indicate that the state's unemployment rate rose from 11.8% in 2007 to an alarming 36.5% in 2011 (National Bureau of Statistics [NBS], 2012). This demographic pressure, compounded by a rapidly growing youth population, provided the political and social impetus for the establishment of the NSVRTB. The Board's mandate encompasses reducing unemployment, encouraging self-employment, teaching new skills, preserving local craft traditions and integrating ex-trainees into their communities. It offers training in sixteen vocational areas including tailoring, plumbing, electrical installation, welding and fabrication, solar installation, aluminium fabrication, automobile repairs and POP (Plaster of Paris), among others. Between 2014 and 2023, the four training centres produced 2,780 graduates a population from which this study draws its sample.

The Nasarawa State Vocational and Relevant Technology Board (NSVRTB), formally established in 1998 under the Nasarawa State Vocational and Relevant Technology Board Edict No. 18 of 1998, is one such institutional response. Mandated to reduce unemployment, encourage self-employment, promote innovation and reintegrate skilled ex-trainees into their communities, the Board has operated for over two and a half decades across four training centres in Lafia, Doma, Wamba and Nassarawa local government areas. Yet, despite this institutional longevity, questions persist regarding the effectiveness of its service delivery and its impact on employment generation in the state. Despite its mandate and its operational history spanning more than two and a half decades, there is a striking paucity of systematic research on the institutional performance of the Board. The few studies that have examined vocational education in the state (Akawu & Agum, 2015; Inyang & Agwadu, 2017; Mohammed & Yakubu, 2020) focus primarily on outcomes, with limited attention to the institutional processes and constraints that shape those outcomes. Hence, while an extensive body of research has examined the contribution of vocational education to employment outcomes (Chakravarty et al., 2019; Ohagwu et al., 2022; Okoliko et al., 2023; Ababio et al., 2024), comparatively little scholarly attention has been directed at the institutional and systemic constraints that limit the capacity of non-formal vocational training centres to fulfil their mandates. Additionally, existing literature on Nigerian TVET tends to focus on school-based formal institutions such as technical colleges, colleges of education, polytechnics and universities, overlooking government-operated skills acquisition boards such as the NSVRTB.

This study fills that gap. Specifically, this paper investigated the institutional constraints hindering effective provision of vocational education by the NSVRTB in Nasarawa State between 2015 and 2024. The central question is: what are the key challenges that impede the effective delivery of vocational training by the Board and how do these challenges affect the quality of skills acquired and the employment outcomes of ex-trainees?

Statement of the Problem

The effectiveness of vocational education institutions is not determined solely by the content of their curricula or the skills they impart but is profoundly shaped by the institutional conditions within which training takes place. In Nasarawa State, the NSVRTB has been operational since 1998, yet little systematic evidence exists on the internal and structural challenges that constrain its effectiveness. Observable challenges include reports of outdated training equipment, weak industry linkages, limited managerial capacity and bureaucratic inefficiencies. These constraints, if not addressed are likely to undermine the quality of training delivered, reduce the relevance of skills acquired and limit the Board's contribution to employment generation ironically negating the very purpose for which it was established. This study responds to the need for empirical, evidence-based analysis of these constraints to inform policy and institutional reform.

Objectives of the Study

The specific objective addressed in this paper is to identify and assess the institutional constraints hindering the effective provision of vocational training by the NSVRTB in Nasarawa State between 2015 and 2024.

The corresponding hypothesis tested is:

H_0: Limited managerial capacity does not significantly hinder the effective provision of vocational education by the Nasarawa State Vocational and Relevant Technology Board.

Literature Review

Institutional Constraints in TVET: A Global Perspective

The literature on TVET in developing and transitioning economies consistently identifies a cluster of institutional constraints that limit the effectiveness of vocational education providers. Ngure (2015), examining TVET institutions in Kenya, found low private sector participation in curriculum design, poor linkages between training and skills utilisation, and inadequate infrastructure. Shrestha (2016) highlighted curriculum rigidity and weak industry–training provider linkages as primary obstacles. Akpan et al. (2023), in a study of technical colleges in Akwa Ibom State, identified poor funding and partnership with industries, inadequate training materials, a lack of qualified teachers and unstable power supply as core constraints. In Ghana, Mohammed (2020) documented the absence of a transition support system, employer discrimination and a mismatch between training and industry needs as significant barriers, while Tondi (2023) found that limited mentorship, weak support structures and a

predominantly theoretical curriculum constituted barriers for entrepreneurship graduates in South Africa.

For Nigerian TVET institutions specifically, Osagie (2015) found a dearth of qualified teachers, poor infrastructure and inadequate funding in Edo State vocational schools, while Abede and White (2019) documented funding deficits, governance weaknesses and poor teaching quality in Trinidad and Tobago. Omoju et al. (2023) identified inadequate funding, weak institutional capacity and poor programme coordination as systemic challenges affecting youth employment programmes in Nigeria. Collectively, this body of evidence suggests that institutional constraints in TVET are multi-dimensional, encompassing financial, managerial, infrastructural, curricular and partnership dimensions.

Curriculum Alignment and Entrepreneurship Education

A critical but often under-examined constraint is the misalignment between TVET curricula and labour market realities. Shrestha (2016) noted that training programmes are often rigid and unable to respond to rapidly changing labour market requirements. Chukwu et al. (2024), studying woodwork technology institutions in Nigeria, found that vocational institutions largely emphasise traditional practical skills while failing to integrate modern technological competencies such as digital design and automated tools. Similarly, Obi and Ojo (2025) found that while vocational programmes improved technical competencies, they did not adequately integrate entrepreneurship education — a finding that resonates strongly with the present study context.

The importance of entrepreneurship education within TVET curricula has been stressed by multiple scholars (Edokpolor & Abusomwan, 2019; Emenike, 2022; Usman & Warlmont, 2024). Okeleke (2017) found that vocational skills acquisition significantly improved self-employment potential only when accompanied by business readiness preparation. Without entrepreneurship training, vocationally trained graduates may possess technical competence but lack the business management skills, pricing knowledge and marketing capabilities necessary to translate skills into sustainable enterprises.

Infrastructure, Equipment and Power Supply

Infrastructure deficiency is a recurring theme across TVET literature. Chepkoech et al. (2020), in a study of Kenyan TVET institutions, found that over 80% lacked adequate ICT infrastructure, workshops and modern classrooms, and that this significantly impacted manpower development. Akusobo-Ogori (2023), studying Bayelsa State vocational centres, identified inadequacies in teachers, laboratories and workshops. Akpan et al. (2023) similarly found that inadequate infrastructure and unstable power supply were key constraints to TVET curriculum delivery in Akwa Ibom State. In the Nigerian context, power supply is a particularly acute challenge: the dependence on generator-based power creates substantial operating costs for both training centres and self-employed graduates, as documented in qualitative evidence in this study.

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Managerial Capacity and Institutional Governance

Managerial capacity encompassing leadership quality, administrative competence, institutional memory and governance stability is a critical but often overlooked determinant of TVET institutional performance. Abede and White (2019) identified weak management as a key challenge in TVET institutions in Trinidad and Tobago, emphasising the 'crucial factor of effective leadership' in advancing TVET. Omoju et al. (2023) found that institutional inefficiencies, including weak governance frameworks and insufficient monitoring, significantly reduce the effectiveness of youth vocational programmes in Nigeria. The literature further establishes that frequent leadership transitions in public institutions lead to disruptions in programme continuity, inconsistent resource allocation and weakened institutional memory (Magatakarda & Ibrahim, 2017).

Industry Partnerships and Labour Market Linkages

The role of industry–institution partnerships in enhancing TVET effectiveness is well documented. Ngure (2015) recommended creating formal linkages with industry to enhance industrial attachments and curriculum relevance. Mabunda and Frick (2020) found that weak relations between a South African vocational college and local industry resulted in negative perceptions of graduates' employability. The Federal Employment Agency Report (2024) on Germany's dual VET system illustrates that robust employer–institution collaboration correlates strongly with high rates of trainee employment, contrasting sharply with the weaker outcomes observed in systems lacking such partnerships. Wami (2024) and Bello et al. (2025) similarly stress the importance of formalised public-private partnerships in strengthening vocational education delivery and improving employment outcomes in Nigeria.

Theoretical Framework

This study is anchored in Human Capital Theory, originating in the pioneering contributions of Schultz (1961) and Becker (1964), and further elaborated by Welch (1975) and Gillies (2015). The theory posits that individuals' knowledge, skills and competencies constitute productive capital, and that investments in education and training yield measurable returns in the form of enhanced productivity, higher wages and improved employment outcomes. Applied to this study, the theory provides the analytical lens through which the institutional delivery of vocational training is evaluated: if the institutions responsible for generating human capital are themselves institutionally deficient, the anticipated returns from vocational investment cannot be fully realised. In this sense, institutional quality is not merely an administrative concern, it is an integral component of the human capital formation process itself.

While Human Capital Theory has attracted critiques for its reductionist assumptions (Marginson, 2019; Preston, 1997), particularly its failure to account for structural inequalities and social barriers, it nonetheless provides a meaningful framework for understanding why investments in vocational training sometimes fail to produce expected labour market outcomes. This study argues that institutional constraints at the level of the training provider constitute a critical mediating variable between training investment and its anticipated outcomes a

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dimension that Human Capital Theory, in its traditional formulation, insufficiently addresses, but which this paper seeks to foreground.

Methodology

The study adopted a descriptive survey research design, integrating quantitative and qualitative techniques. This mixed-method approach was selected because the complexity of institutional constraints requires both the breadth of quantitative data — to establish patterns and test hypotheses across a representative sample and the depth of qualitative insights to contextualise findings and illuminate the lived experiences of institutional actors. This combination ensures methodological triangulation, enhances validity and permits both statistical generalisation and contextual interpretation (Creswell, 2018). The study was conducted in Nasarawa State, North-Central Nigeria, focusing on the four NSVRTB training centres located in Lafia (state capital), Doma, Wamba and Nassarawa local government areas. These centres represent a mix of urban and rural contexts, enabling a holistic assessment of institutional challenges across diverse operational environments.

The study population comprised 2,780 ex-trainees who graduated from the NSVRTB's skills acquisition programme between 2014 and 2023, as well as key institutional stakeholders. A sample of 350 ex-trainees was determined using the Yamane (1967) formula at 95% confidence level, and subsequently distributed proportionally across the four training centres using Bowley's proportional allocation technique. A total of 312 questionnaires were validly returned, representing an 89.1% response rate. Additionally, 24 key informants were purposively selected, including the Executive Secretary and Director of Training of the Board, four centre managers, directors from the Nasarawa State Ministries of Education and Science and Technology, four ex-trainee association chairmen and twelve ex-trainees spanning employed, self-employed and unemployed categories.

Primary data were collected through a structured questionnaire administered to ex-trainees and semi-structured Key Informant Interview (KII) guides used with institutional stakeholders. The questionnaire underwent face, content and construct validity assessment by experts in Public Administration and Public Policy Analysis at the Federal University of Lafia, and yielded a Cronbach's alpha reliability coefficient of 0.86, indicating good internal consistency. Key informant interviews were audio-recorded with participants' consent and lasted between 30 and 40 minutes each. Interview data were transcribed verbatim and subjected to qualitative content and thematic analysis. Secondary data were drawn from official Board records, government documents and peer-reviewed literature.

Quantitative data were analysed using descriptive statistics (frequencies and percentages). The research hypothesis was tested using Simple Linear Regression at the 0.05 level of significance. Qualitative data from key informant interviews were analysed using qualitative content and thematic analysis, with direct quotations deployed to substantiate interpretations and preserve the authenticity of stakeholder perspectives. The integration of quantitative and qualitative findings at the interpretation stage ensured methodological triangulation.

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Results

Demographic Profile of Respondents

Of the 312 respondents, 215 (68.91%) were male and 97 (31.09%) were female. The age distribution showed that the majority (39.42%) fell within the 26–33 year bracket, followed by 18–25 year olds (27.24%), reflecting predominantly youth participation in the Board's programmes. Regarding educational attainment, 45.51% had secondary education, 23.72% primary education, 16.99% no formal education and 13.78% tertiary education — indicating that the NSVRTB predominantly serves individuals with lower formal educational qualifications. Employment status data showed 69.23% self-employed, 16.67% in wage employment and 14.10% unemployed. Tailoring was the most common training area (10.90%), followed by POP (9.29%), plumbing (7.69%) and solar installation (7.37%.)

Curriculum Misalignment with Labour Market Needs

Table 1: Respondents' Perception of Vocational Training Alignment with Job Market Needs

Response	Frequency	Percentage (%)
Strongly Agree (training does not meet market needs)	87	27.88
Agree	32	10.26
Undecided	11	3.53
Disagree	73	23.40
Strongly Disagree (training adequately meets market needs)	109	34.94
Total	312	100

Source: Field Survey, 2026

While a majority of respondents (58.34%) believed the training adequately met the needs of the job market, a substantial minority of 119 respondents (38.14%) felt otherwise. This finding underscores a notable mismatch between the skills acquired and the actual demands of the evolving labour market. Qualitative evidence deepened this insight, with a key informant noting:

> *The training was very heavy on acquiring technical skills how to sew, how to weld, how to cut wood and so on. But it was very light on how to run a business. They didn't teach us much about pricing our work, calculating profit and losses, marketing ourselves and managing customers. (Key Informant Interview, Lafia, March, 2026)*

This reflects the gap between traditional vocational pedagogy and the multi-dimensional competencies required in contemporary informal and semi-formal labour markets. Furthermore, qualitative findings from Board officials acknowledged that equipment is often obsolete, limiting exposure to modern industry-standard tools and technologies.

Absence of Entrepreneurship Training

Table 2: Respondents' Perception of Entrepreneurship Training as a Constraint

Response	Frequency	Percentage (%)
Strongly Agree	95	30.45
Agree	74	23.72
Undecided	13	4.17
Disagree	50	16.03
Strongly Disagree	80	25.64
Total	312	100

Source: Field Survey, 2026

A majority of respondents (54.17%) identified the lack of entrepreneurship training as a significant constraint on their ability to create employment opportunities. This finding is particularly notable given that 69.23% of ex-trainees are self-employed a pattern suggesting that the Board's graduates default to self-employment not from informed entrepreneurial intent but from the absence of wage employment alternatives. The Director of Training acknowledged during an interview that the curriculum is heavily technical and that business management skills are not systematically integrated into training modules. This structural omission has significant implications: graduates who possess the technical ability to produce goods or render services but lack the business acumen to price, market, manage customers and sustain operations are unlikely to build viable enterprises.

Inadequate Training Facilities and Obsolete Equipment

Table 3: Respondents' Perception of Training Facilities and Equipment

Response	Frequency	Percentage (%)
Strongly Agree	81	25.96
Agree	84	26.92
Undecided	17	5.45
Disagree	67	21.47

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Response	Frequency	Percentage (%)
Strongly Disagree	63	20.19
Total	312	100

Source: Field Survey, 2026

More than half of respondents (52.88%) perceived inadequate training facilities and outdated equipment as constraints on training quality. Key informant interviews provided vivid corroboration. The Director of Training stated:

> *Most of the equipment currently available in our training centres are obsolete and outdated and no longer reflect the modern tools used in today's industries. Trainees may not be fully exposed to contemporary technologies required in the labour market. There is a strong need to replace old machines with modern equipment to enhance training quality and ensure that trainees acquire relevant, up-to-date skills. (Key Informant Interview, Lafia, February, 2026)*

A trainee from the Nassarawa centre recounted: 'Sometimes we would have one functional welding machine for a class of over 30 trainees. One spends more time waiting for a turn than actually practicing. And the machines we used were old models' (Key Informant Interview, Nassarawa, February, 2026). The Executive Secretary additionally highlighted erratic electricity supply as a compounding structural challenge, noting that since most training equipment requires constant power, irregular supply frequently disrupts training schedules and reduces the quality of hands-on practical exposure.

Limited Managerial Capacity

Table 4: Respondents' Perception of Limited Managerial Capacity

Response	Frequency	Percentage (%)
Strongly Agree	99	31.73
Agree	113	36.22
Undecided	29	9.29
Disagree	35	11.22
Strongly Disagree	36	11.54
Total	312	100

Source: Field Survey, 2026

A substantial majority of respondents (67.95%) agreed that limited managerial capacity significantly hinders effective vocational training provision. Qualitative findings elaborated the specific mechanism through which this operates: frequent and abrupt changes in the Board's

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leadership. Training centre managers consistently highlighted how leadership transitions disrupt programme continuity, create inconsistent funding allocation and introduce incompatible administrative priorities. One manager noted: 'Frequent changes in the leadership of the Board often disrupt the continuity of training programmes. Each new administration tends to introduce different priorities, which affects planning, funding allocation and overall programme stability' (Key Informant Interview, 2026). Ex-trainees' narratives reinforced this assessment, describing periods of reduced practical instruction, equipment neglect and modified training structures coinciding with leadership changes. Another ex-trainee stated: 'During my training, there were times when activities slowed down because of changes in leadership at the Board. Equipment was not maintained regularly and some instructors were not consistent. This really affected how much we were able to learn practically' (Key Informant Interview, Lafia, March, 2026).

Weak Industry–Employer Partnerships

Table 5: Respondents' Perception of Industry Partnerships as a Challenge

Response	Frequency	Percentage (%)
Strongly Agree	89	28.53
Agree	96	30.77
Undecided	31	9.94
Disagree	51	16.35
Strongly Disagree	45	14.42
Total	312	100

Source: Field Survey, 2026

A majority of respondents (59.30%) agreed that the Board lacks strong industry and employer partnerships, which limits job creation opportunities for ex-trainees. This was reflected in the absence of a formal job placement mechanism: an ex-trainee in Nassarawa stated: 'I found my current job as an assistant welder at a construction company through a combination of skills I got and personal networking. There was no formal job placement arrangement that I know of' (Key Informant Interview, Nassarawa, February, 2026). Another interviewee noted: 'I was simply given my certificate and told to go. I expected the Board to link us with companies or organisations that need skilled workers. It feels like once you finish the training, you are forgotten' (Key Informant Interview, Wamba, March, 2026).

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Bureaucratic Hurdles

Table 6: Respondents' Perception of Bureaucratic Hurdles

Response	Frequency	Percentage (%)
Strongly Agree	103	33.01
Agree	101	32.37
Undecided	32	10.26
Disagree	35	11.22
Strongly Disagree	41	13.14
Total	312	100

Source: Field Survey, 2026

A majority of respondents (65.38%) perceived bureaucratic hurdles as a significant constraint on effective training delivery. Key informant evidence illuminated the specific mechanisms: procurement delays due to multi-level administrative approval processes, delayed enrollment due to bureaucratic clearance requirements and limited operational autonomy. A senior official explained: 'Government agencies do not always have the flexibility to make quick decisions regarding procurement or the adjustment of programmes. Many decisions require approval from higher authorities, which can slow down implementation. Even minor operational decisions sometimes take longer than necessary' (Key Informant Interview, Lafia, April, 2026). An ex-trainee who suffered prolonged delays added: 'After submitting my application, it took several months before the final list of trainees was released. Some applicants had already moved on to other activities because of the delay' (Key Informant Interview, Nassarawa, March, 2026).

Test of Hypothesis: Limited Managerial Capacity and Effective Provision of Vocational Education

Table 7: Simple Linear Regression Analysis — Effect of Limited Managerial Capacity on Effective Provision of Vocational Education

Predictor	R	R^2	F(1,310)	β	p
Limited Managerial Capacity	.117	.014	4.33	−.117	.038

Source: Field Survey, 2026

The regression analysis yielded a statistically significant result: $F(1, 310) = 4.33$, $p = .038$. The standardised beta coefficient ($\beta = -.117$, $t = -2.08$, $p = .038$) indicates that limited managerial capacity exerts a statistically significant negative effect on the effective provision of vocational

education. The coefficient of determination ($R^2 = .014$) shows that limited managerial capacity accounts for 1.4% of the variance in effective provision of vocational education. While the explanatory power is modest, this is consistent with expectations in social science research where institutional outcomes are shaped by multiple interacting factors. The negative sign of the beta coefficient confirms that as managerial capacity limitations intensify, the effectiveness of vocational training delivery deteriorates. Accordingly, the null hypothesis (H_0: limited managerial capacity does not significantly hinder effective provision of vocational education) is rejected. This finding provides empirical evidence that managerial capacity constraints constitute a genuine and statistically measurable impediment to effective TVET delivery, not merely a perceived or anecdotal one.

Discussion

Curriculum Misalignment and the Entrepreneurship Deficit

The finding that a significant proportion of ex-trainees perceive misalignment between the training content and labour market demands is consistent with a broad body of TVET literature that documents curriculum rigidity and institutional unresponsiveness to evolving market needs (Shrestha, 2016; Ngure, 2015; Chukwu et al., 2024). In the NSVRTB context, the problem is particularly acute because the Board's graduates predominantly enter self-employment — a career pathway that demands not only technical competencies but also entrepreneurial skills, financial literacy and business management capabilities. The absence of entrepreneurship training from the curriculum thus represents a structural mismatch between the Board's dominant employment outcome (self-employment) and the knowledge infrastructure it provides to facilitate that outcome.

This finding aligns with Human Capital Theory's proposition that the returns to vocational investment are optimised when training is comprehensively aligned with the functional demands of the labour market. The theory's implicit assumption that technical skill acquisition alone is sufficient to generate employment outcomes is challenged here: in a context where self-employment is dominant, the human capital formation process must encompass business creation competencies in addition to occupational skills. The absence of entrepreneurship education represents a systematic undersupply of a critical form of human capital, undermining the Board's potential contribution to employment generation.

Infrastructure Deficits and the Quality of Skills Transmission

The finding that inadequate and obsolete equipment limits training quality adds an empirical dimension to the infrastructure constraints documented by Chepkoech et al. (2020) and Akpan et al. (2023) in comparable African TVET contexts. In the NSVRTB setting, the challenge is compounded by Nigeria's endemic electricity supply crisis: since most vocational training requires electrically powered tools and machinery, erratic power supply directly disrupts the quantity and quality of practical instruction. This has a direct bearing on the human capital formation process — skills that require repeated practice and exposure cannot be adequately developed when equipment is scarce, shared among too many trainees or simply non-functional.

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The finding that over half of respondents rated facilities as inadequate or moderately adequate, combined with the Director of Training's acknowledgement that equipment no longer reflects industry standards, suggests that trainees may graduate with skills calibrated to obsolete technologies. In competitive labour markets, this could translate into reduced employability and weaker entrepreneurial outcomes, as ex-trainees find that the tools and methods they were trained on do not correspond to contemporary industry practice.

Managerial Capacity, Leadership Stability and Institutional Effectiveness

The statistically significant negative relationship between limited managerial capacity and effective vocational training delivery ($\beta = -.117$, $p = .038$) is the most theoretically significant finding of this study. It provides empirical validation for a proposition that is widely asserted in TVET policy discourse but rarely subjected to inferential statistical analysis in the Nigerian context: that institutional management quality directly determines training quality and employment outcomes. The qualitative findings particularly the recurrent theme of leadership instability and its cascading effects on programme continuity, resource allocation and ex-trainees' learning outcomes provide a rich explanatory account of the mechanism through which managerial constraints operate.

This finding resonates strongly with Abede and White's (2019) emphasis on effective leadership as the crucial factor in advancing TVET, and with Omoju et al.'s (2023) finding that institutional inefficiencies significantly reduce vocational programme effectiveness in Nigeria. From a Human Capital Theory standpoint, the finding suggests that the institutional governance environment constitutes a critical, and currently insufficiently acknowledged, determinant of the returns to vocational training investment. When leadership transitions are frequent, when institutional memory is disrupted and when administrative processes are excessively bureaucratic, the stock of human capital that training produces is diminished not because trainees are less capable, but because the institutional conditions for effective knowledge and skills transmission have been compromised.

Industry Partnerships: A Missing Link

The finding that a majority of respondents perceived the Board's industry partnerships as inadequate and that the regression analysis for hypothesis two (not reported in this paper) confirmed that industry partnerships have not significantly promoted vocational education, points to a structural gap in the NSVRTB's operational ecosystem. In the German dual VET system, the international gold standard the institutionalisation of employer co-responsibility for training delivery is the foundation of its effectiveness (Federal Employment Agency Report, 2024). By contrast, the NSVRTB appears to operate largely in isolation from the industries and employers that ultimately determine the market value of the skills it produces. The absence of formal job placement mechanisms, industry-informed curriculum review processes and workplace attachment programmes means that the link between training provision and labour market absorption is mediated almost entirely by the informal initiative of individual ex-trainees. This is a significant institutional failure with direct implications for employment generation.

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Bureaucratic Constraints: Governance as an Impediment

The finding that administrative and procurement bottlenecks significantly impede training delivery adds an important governance dimension to the analysis. In the NSVRTB context, the organisation's embeddedness within the broader state government administrative structure with its multiple approval layers, slow procurement processes and limited operational autonomy creates systemic delays that directly affect the availability of training materials, the enrollment of trainees and the responsiveness of the institution to operational needs. This finding resonates with broader critiques of public sector governance in Nigeria, which document how bureaucratic inefficiencies undermine institutional performance (Omoju et al., 2023). From a reform perspective, it suggests that improving TVET outcomes requires not only institution-level interventions but also broader public administration reforms that extend greater operational autonomy to front-line service delivery organisations.

Conclusion and Recommendations

Conclusion

This paper has demonstrated that the effective provision of vocational education by the Nasarawa State Vocational and Relevant Technology Board is constrained by a cluster of interrelated institutional challenges: curriculum misalignment with labour market needs; the systematic absence of entrepreneurship training; inadequate and obsolete training infrastructure; limited managerial capacity compounded by frequent leadership turnover; weak industry–employer partnerships; and bureaucratic bottlenecks in procurement and administration. Among these, limited managerial capacity has been empirically shown to exert a statistically significant negative effect on training effectiveness ($\beta = -.117$, $p = .038$). Anchored in Human Capital Theory, the paper argues that institutional quality is not peripheral to the question of vocational education outcomes it is central to it. The returns to vocational investment are not automatic: they depend fundamentally on the quality of the institutions through which that investment is mediated. Addressing the institutional constraints documented in this study is therefore a necessary condition for the NSVRTB to fulfil its mandate of reducing unemployment and generating sustainable employment in Nasarawa State.

Recommendations

On the basis of the findings and discussion, the following recommendations are advanced:

i. Curriculum Reform and Labour Market Alignment: The NSVRTB should institutionalise a continuous curriculum review mechanism that actively incorporates input from employers, industry associations and recent labour market tracer studies. Curricula should be updated at a minimum every two years to reflect changing industry technologies and market demands. The integration of modern digital tools, emerging technologies and industry-standard equipment should be prioritised.

ii. Mandatory Integration of Entrepreneurship Education: Entrepreneurship, business management, financial literacy, marketing and customer service modules should be

integrated as compulsory components of all vocational training programmes. The design of these modules should be informed by the specific business contexts most relevant to each vocational trade, equipping ex-trainees with the practical business acumen necessary to establish and sustain viable enterprises.

iii. Substantial Infrastructure Renewal and Power Solutions: The Board should advocate forcefully to the state government for a comprehensive capital investment programme to replace obsolete equipment and tools with modern, industry-standard alternatives. Simultaneously, sustainable power supply solutions — including solar power installations — should be explored for training centres to mitigate the impact of erratic grid electricity on training delivery.

iv. Strengthening Managerial Capacity and Ensuring Leadership Continuity: The state government should establish transparent, merit-based appointment procedures for Board leadership positions and introduce minimum tenure protection to prevent disruptive frequent changes. A systematic capacity-building programme for management and administrative staff should be instituted, encompassing training in programme planning, monitoring and evaluation, financial management and leadership. Institutional knowledge management systems should be established to preserve corporate memory across leadership transitions.

v. Formalisation of Industry Partnerships and Job Placement Services: The Board should establish a formal Industry Liaison Unit responsible for developing, maintaining and monitoring structured partnerships with employers, industry associations and private sector organisations. These partnerships should encompass curriculum co-design, workplace attachment programmes, equipment donation and certification recognition. A job placement and labour market information service for ex-trainees should be established as a core post-training support function.

vi. Administrative Reform to Reduce Bureaucratic Bottlenecks: The state government should review and streamline the administrative approval processes governing the Board's operations, with a view to extending greater operational autonomy in areas such as procurement, programme modification and emergency resource deployment. Dedicated budget lines for training materials and equipment maintenance should be ring-fenced to prevent delays caused by general budget allocation processes.

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