Trainers' Readiness for Modularised Competency-Based Education and Training in Uganda: Insights from Regil Vocational Training Institute

[1*]AIDAH T. NGANDA, [2]ERIC DOUGLAS KALANDA, [3]DISAN KUTEESA, [4]NATHANIEL MAYENGO, [5]RICHARD SEBAGGALA

[1, 2] *Department of Technical Teacher and Instructor Education, Kyambogo University, Kampala, Uganda*

[3, 4] *Department of Education Foundations and Psychology, Kyambogo University, Kampala*

[5] *School of Business, Uganda Christian University, Kampala, Uganda*

[*]*Corresponding author email: aknganda@kyu.ac.ug*

Accepted: 4th Dec 2025, Published: 10th Dec 2025

https://doi.org/10.58653/nche.v13i1.4

Abstract

In 2022, Uganda introduced a modularised curriculum for Technical and Vocational Education and Training (TVET) to advance Competence-Based Education and Training (CBET). This study examined trainers' readiness to implement modularised CBET at Regil Vocational Training Institute (VTI). Specifically, it: (i) assessed the adequacy of human resources, infrastructure, and instructional materials; (ii) explored trainers' competence and familiarity with the CBET curriculum and pedagogy; and (iii) evaluated readiness to apply CBET-aligned assessment practices. Using a qualitative action research design, data was collected from three focus group discussions with 19 trainers, key informant interviews, and structured learning-environment observations. Thematic analysis, following Braun and Clarke's (2006) framework, guided interpretation. The findings show that although trainers met formal qualification requirements and demonstrated general awareness of modularised CBET, substantial gaps persisted in CBET-specific pedagogy, assessment literacy, ICT-supported instruction, and

curriculum interpretation. Infrastructural limitations, including inadequate workshops, obsolete equipment, and minimal digital facilities, further constrained implementation. Assessment practices were inconsistently aligned to CBET principles, reflecting conceptual confusion and institutional misalignment between instructional and assessment regimes. Whereas previous studies have emphasised mainly trainer deficits, this study shows that CBET readiness in Uganda is primarily a systemic institutional capability issue. This issue is rooted in incompatible assessment regimes, insufficient digital and physical infrastructure, and weak organisational support structures. By combining Curriculum Implementation Theory and Institutional Theory within an action research design, the study offers a multi-level explanation for why modularised CBET reforms often fail to transition from policy to practice within TVET institutions. The study implies that improving CBET readiness requires strengthening not only trainer competence but also institutional systems, assessment structures, and organisational alignment. This highlights CBET readiness as an institutional ecosystem challenge rather than a trainer-level deficit.

Keywords: *Competence-Based Education and Training; Modularised curriculum; Readiness; Trainers; TVET.*

Introduction

Technical and Vocational Education and Training (TVET) plays a critical role in Uganda's economic transformation by equipping youth with practical skills for employment and innovation (Seung Il, 2021; Yusvana, 2025). In line with Sustainable Development Goal 4 on equitable quality education (UN, 2015), Uganda has introduced major TVET reforms, including the shift to Competence-Based Education and Training (CBET) using modularised curricula, to enhance labour market alignment (MoES, 2019, 2025).

However, recent studies indicate that implementation has been uneven. Trainers often lack orientation in CBET pedagogy and assessment, while institutions face digital and infrastructural gaps (Agole, 2022; Ankunda et al., 2024; Kidega et al., 2024; Turyatemba, 2023). These weaknesses risk undermining the intended outcomes of CBET

reforms under Uganda's Vision 2040 and National Development Plan IV (NPA, 2024). Moreover, scholars have noted that education reforms in Uganda often proceed without adequate support for those expected to implement them (Dambudzo, 2018; Wambi et al., 2024). While some studies have examined institutional readiness for CBET, limited attention has been paid to the practical readiness of trainers themselves, particularly in interpreting and delivering modularised content (Arinaitwe, 2021; Mutebi & Ferej, 2023).

This study responds to that gap by examining trainer readiness at Regil Vocational Training Institute. It explores their capacity to implement modularised CBET with fidelity, including curriculum interpretation, delivery methods, and assessment practices. Without such readiness, modularised CBET risks remaining a policy aspiration rather than a classroom reality. Against this background, this study examined trainer readiness for modularised CBET at Regil VTI in Uganda. Specifically, the study:

(i) Examined the adequacy of human resources, infrastructure and instructional materials available for CBET at Regil VTI.

(ii) Explored trainers' competence and familiarity with the CBET curriculum and pedagogy at Regil VTI.

(iii) Assessed trainers' readiness to apply CBET-aligned assessment tools and practices at Regil VTI.

Theoretical underpinning

This study is anchored in Curriculum Implementation Theory (CIT) (Gross et al., 1971) and Institutional Theory (Scott, 2014). These two complementary frameworks illuminate both the individual-level and institutional-level dynamics shaping the implementation of modularised CBET. Whereas CIT explains how the actions, capacities, and resource environments of trainers influence curriculum enactment, the Institutional Theory highlights the broader organisational forces that shape trainers' behaviour and illuminate the extent to which reforms take root in practice.

The CIT emphasises that curriculum reforms succeed only when implementers possess the competence, resources, and orientation needed to enact them. In the context of modularised CBET, CIT aligns

directly with this study's focus on infrastructure readiness, trainer competence, and assessment capacity. The theory underscores that without adequate tools, workshops, ICT facilities, and instructional materials, trainers cannot facilitate the hands-on, competency-driven learning CBET requires. Likewise, effective implementation depends on trainers' ability to interpret modular outcomes, apply learner-centred pedagogy, and integrate technology into instruction. CIT also stresses that assessment practices must reflect the philosophy of the curriculum; therefore, evaluating trainers' capacity to design and apply CBET-aligned assessments, such as performance tasks and workplace-based evaluations, is central to determining readiness. Overall, CIT provides a coherent lens for understanding how trainer skills, resource environments, and assessment practices shape the fidelity of modularised CBET implementation.

The Institutional Theory equally extends this analysis by situating trainer readiness within the wider organisational and policy environment that structures behaviour in TVET institutions. Scott's (2014) tripartite framework, including the regulative, normative, and cultural-cognitive pillars, explains how institutional forces guide, constrain, or enable trainers' actions. The regulative pillar captures the formal rules, policies, and standards that govern training and assessment in Uganda's TVET system, including the TVET Act, curriculum modules, and institutional directives that define what trainers must do. The normative pillar reflects the professional values and expectations surrounding learner-centred pedagogy, competency-based assessment, and industry relevance; these norms shape what trainers believe they should do in their professional roles. The cultural-cognitive pillar further highlights the beliefs, assumptions, and interpretations that trainers hold about CBET. These subjective understandings often determine whether trainers embrace or resist new reforms and whether they internalise the underlying philosophy of modularisation. The Institutional Theory, therefore, demonstrates that even when resources and training are available, implementation may still falter if the institutional environment does not reinforce new norms or if trainers' beliefs and interpretations are misaligned with the reform.

Together, CIT and the Institutional Theory provide a comprehensive and coherent framework for examining trainer readiness for modularised CBET in Uganda. Whereas CIT captures the practical, pedagogical, and resource-related dimensions of implementation at the trainer level, the Institutional Theory illuminates the broader policy, normative, and cultural forces that shape trainer behaviour and institutional alignment. The integration of these two perspectives allows for a holistic understanding of how both trainer competence and institutional contexts interact to influence the implementation of modularised CBET. Thus, the dual-theoretical approach is relevant in analysing the extent to which Uganda's TVET trainers are prepared to deliver the modularised CBET curriculum in ways that meet national reform ambitions and ultimately advance the country's broader human capital development agenda.

Related Literature

Readiness in connection with infrastructure, human resources, and instructional materials

CBET requires a shift from teacher-centred delivery to learner-centred, skills-based instruction supported by modern infrastructure, adequate human resources, and appropriate instructional materials (MoES, 2019; Guskey, 2002). However, studies in Uganda and the East African region highlight institutional unpreparedness for effective implementation of CBET, citing insufficient trainer development, outdated equipment, and limited access to learning resources (Muthuri, 2023; Onyango, 2023; Ankunda et al., 2024).

Despite policy efforts under the TVET Act (2025) to streamline training systems, many institutions continue to struggle with basic requirements such as functional workshops, relevant instructional materials, and access to digital tools (Muzira & Bondai, 2020; Mutebi & Ferej, 2023). ICT infrastructure remains particularly underdeveloped, with many institutions lacking internet access, e-learning platforms, or sufficient computers for instruction (Kachope et al., 2025). Furthermore, the use of outdated materials and textbooks continues to constrain curriculum delivery (Kidega et al., 2024).

Trainer readiness is also influenced by the administrative culture and the availability of professional development opportunities. Institutional resistance to change, limited mentorship, and competing administrative roles often hinder trainer engagement with reforms (Nambusi & Kisubi, 2024). Conversely, targeted capacity building and Continuous Professional Development (CPD) programmes have shown positive impacts on trainer confidence and skills development (Karuhanga & Muhwezi, 2025).

Readiness in connection with trainers' competence and familiarity with CBET curriculum

Effective CBET implementation depends on trainers' ability to interpret curriculum modules, deliver hands-on instruction, and assess competencies accurately (Kipkoech et al., 2024). However, multiple studies reveal that trainers in both Uganda and the region often lack the pedagogical and technical expertise needed to implement modularised CBET (Muthoka & Mbirithi, 2025; Niyonasenze et al., 2024; Nsengimana, 2021).

Regional studies show widespread trainer under-preparation, especially in applying learner-centred methods and integrating technology into instruction. In Uganda, for instance, many trainers report difficulty interpreting competence frameworks, translating them into lesson plans, or accessing up-to-date teaching materials (Kidega & Obbo, 2024). While some instructors demonstrate familiarity with CBET concepts, gaps persist in applying these effectively in the classroom (Papier & Mawoyo, 2024).

Moreover, trainer readiness is shaped by institutional leadership. Mixed attitudes among administrators, ranging from support to uncertainty, have been found to affect implementation fidelity (Turyatemba, 2023; Namaalwa et al., 2025). Weak supervision and miscommunication further exacerbate readiness challenges (Okumu & Bbaale, 2019; Wambi & Nalweyiso, 2024).

Readiness in connection with CBET assessment tools and practices

CBET requires performance-based, competency-aligned assessment tools rather than traditional cognitive testing. However, in practice,

many TVET institutions continue to rely heavily on written assignments, with little use of workplace-based or practical evaluations (Kachope et al., 2025; Yusop et al., 2023).

Although efforts have been made to improve fairness and transparency through assessor training (Karuhanga & Muhwezi, 2025), assessment remains inconsistently aligned with CBET principles. Trainers often lack clear guidance on designing and implementing tools such as rubrics, observation checklists, or project-based evaluations. Moreover, logistical and institutional mismatches, such as differing academic and assessment calendars undermine assessment effectiveness (Turyatemba, 2023).

Methodology

Research design and sampling strategy

This study employed a qualitative action research design (Creswell, 2014), chosen for its ability to support both diagnosis and collaborative reflection on trainers' readiness for CBET. The action research process was structured in two iterative cycles: an initial needs assessment, followed by a reflection phase aimed at informing institutional improvements. This approach allowed researchers to engage participants meaningfully while generating context-specific insights.

Regil VTI was purposively selected as a representative TVET institution implementing modularised CBET. A census of all 27 trainers and administrators was attempted, and 19 participants consented. The sample reflected all five trades taught at the institution, including agriculture, auto-mechanics, fashion and design, electricity, and building construction, which ensured diversity of perspectives. Data collection continued until thematic saturation was reached (Ayton et al., 2023).

Data collection

Three qualitative methods were used: focus group discussions (FGDs), key informant interviews (KIIs), and observation of the learning environment (LE). FGDs were trade-specific and mixed to capture both general and discipline-specific readiness issues. KIIs were conducted with institutional administrators, while structured observation focused

on infrastructure, curriculum documents, instructional materials, and assessment practices.

Data was collected over seven days using interview guides, FGD guides, and observation checklists. All instruments were aligned with the study's three objectives: infrastructure and resources; trainer competence and curriculum familiarity; and CBET-aligned assessment practices.

Data analysis and presentation

Data was analysed thematically using Braun and Clarke's (2006) framework. Thematic coding was done manually and directly linked to the study objectives. Codes were organised into three major themes: (1) infrastructure and instructional resources; (2) trainer competence and curriculum familiarity; and (3) assessment practices. Verbatim excerpts and indirect reporting were used to illustrate key findings.

Data trustworthiness

Credibility was enhanced through data triangulation and peer validation across FGDs, KIIs, and LE observations data (Creswell, 2014). Data collection plans encouraged less-tense engagements. Only consistent data from the different methods was used in reporting. Follow-up discussions with participants enhanced the accuracy of data interpretation. Prolonged engagement during data collection helped researchers to build rapport and gain deeper insights.

Ethical considerations

Participation was voluntary, and participants could withdraw at any point. Ethical clearance was obtained, and informed consent was secured from all participants through signed attendance registers. No personal identifiers were used, and pseudonyms were applied to ensure confidentiality. Data was also stored securely and used strictly for academic purposes.

Findings

The findings are presented in line with the study objectives: (i) adequacy of infrastructure, human resources, and instructional materials; (ii) trainer competence and familiarity with the CBET curriculum and pedagogy; and (iii) readiness to apply CBET-aligned assessment practices.

Demographic characteristics

The demographic characteristics of the participants are presented in Table 1. The participants represented all the five trades taught at Regil VTI, with a mix of male and female trainers, and included two institutional leaders. Most were aged between 31 and 60, suggesting a mature workforce with professional experience.

Table 1: *Participants' demographic characteristics*

Demographic categories (N=19)	Variables	(n)	(%)	Remarks
Gender	Female	7	36.8	
	Male	12	63.2	
Groups	Principals	2	10.5	All male
	Trainers	17	89.5	
Persons with disability	Yes	1	5.3	Female
	No	18	94.7	Male and female
Age in years	16 – 30	1	5.3	
	31– 60	18	94.7	
TVET Trades	Agriculture	3	15.8	More female
	Auto Mechanics	3	15.8	All male
	Fashion and Design	5	26.3	All female
	Building Construction	4	21.1	All male
	Electricity	4	21.1	All male

Infrastructure, human resources and instructional materials

In this section, we present data on human resource qualifications from the KII with the Regil VTI principal. Equally, data on infrastructure and instructional materials was generated using the LE observation schedule and focus group discussions. The findings are presented in Tables 2 and 3, along with verbatim quotations from the FGD.

Human resource readiness

Table 2: *Trade-based qualifications of TVET trainers at Regil VTI*

TVET Trades	AG		AM		FD		BC		EI			
	F	M	F	M	F	M	F	M	F	M	Total	
Training Qualifications											n	%
Master's Degree	0	2	0	0	0	0	0	1	0	0	3	12
Bachelor's Degree	2	3	0	1	2	0	0	1	0	1	10	40
Diploma	0	0	0	4	3	0	0	1	0	4	12	48
Total	2	5	0	4	5	0	0	3	0	5	25	100

AG – Agriculture; AM – Auto Mechanics; FD – Fashion and Design; BC– Building Construction; EI – Electricity

All trainers met the minimum qualification requirements for TVET instruction. However, qualifications were largely academic (diplomas or degrees) and did not necessarily reflect preparedness for delivering CBET-specific pedagogy or assessment. Trainers acknowledged a lack of exposure to modularised curriculum delivery methods, practical assessment strategies, and ICT integration.

Readiness in connection with infrastructure and instructional materials

Trainers in FGD 1 were also asked to share how prepared their VTI was in relation to infrastructure capacities. We triangulated their views with data from the LE observation schedule narratives and KII.

Table 3: *Status of physical infrastructure of Regil VTI*

LE observation aspect	Status	Remarks
Location, fencing and security	• Temporary • Functional (5)	• Spacious, near a main access road, and has a signpost • Has 8 temporary fence and security personnel • Has solar security cameras and lights
Workshops for TVET trades	• Improvised	• Temporary structure for BC
	• Functional	• Five manual sewing machines for FD, no electric or embroidery or dry cleaning machines
	• Improvised, outdated technology	• Temporary workshop structure, incomplete floors, one non-functional vehicle
ICT Instruction equipment	• Operational desktop	• A desktop computer system for the principal's office • No computer room for students and staff • Personal computers for some staff • No internet connection; staff use personal internet
Lecture rooms	• Usable • Unusable when it rains	• One administrative block with offices, staffroom and meeting room. • A face-lift on the walls • Connected to electricity with only a few lights • 4 temporary structures without shutters and cemented floor • No library for the VTI • Television in staffroom

Accommodation, dinning, medical, and sanitation facilities	• Usable and some • incomplete ones • Unhygienic • Insufficient • Not well-equipped	• Dormitories for male and female students • Temporary kitchen structure • No dining facilities for students • Latrines for female and male staff and students • Sick bay available with basic medicine • No privacy for female and male students or staff

Source: LE observation notes, July 2025

Observations from Table 3 reveal a significant misalignment between Regil VTI's infrastructure and the requirements of modularised CBET delivery. While the institution benefits from strong agricultural assets, including land, livestock, and crop farms, this strength does not match across other trades.

Most workshops operate in temporary, under-resourced spaces, and several lecture rooms remain incomplete, lacking essential features such as shutters, finished floors, and lighting. A key informant highlighted a critical gap in practical training, noting, "…in automotive, we lack a running vehicle" (KII, July 2025), underscoring a broader issue of outdated or non-functional equipment.

The technological infrastructure is also severely limited. The VTI lacks a computer lab, internet connectivity, and digital teaching aids. Trainers reported relying on personal devices and data for ICT-supported instruction. As one participant explained, "We employ virtual construction sites… mobile phone apps and learning platforms" (FGD-3, July 2025). While such innovation reflects commendable adaptation, it remains constrained by systemic digital deficits.

These infrastructure and material shortages are particularly pronounced in trades such as Electricity (EI), Fashion and Design (FD), and Auto-Mechanics (AM), where trainers reported minimal access to instructional models and aids. This creates inequities in readiness across

departments and limits the institution's ability to deliver hands-on, competency-based training as envisioned under CBET.

Trainers' familiarity and competence with CBET curriculum and pedagogy

While trainers are implementing the modularised curriculum and can describe its benefits, a significant gap exists between official adoption and deep, effective application. The learning environment shows no visible evidence of the curriculum, with observers noting "no posters, charts or module outlines for MC being taught" (LE observation notes, July 2025), and trainers confirm receiving no formal orientation.

In practice, despite trainers using methods such as continuous assessment and hands-on projects during training, this engagement remains fragile. It is threatened by a "negative attitude" among staff who "*do not understand its difference from other assessment types*" (Participant 3, FGD-2, July 2025). Furthermore, the curriculum is seen as an imperfect tool, with trainers calling for the "*re-organisation of modules for coherence*" (Participant 16, FGD-2, July 2025). These structural and attitudinal barriers are compounded by self-acknowledged "limited skills of ICT use during instruction" (FGD-2 plenary notes, July 2025), ultimately constraining the curriculum's potential and weakening that readiness.

Readiness in connection with CBET-aligned assessment tools and strategies

Trainers' assessment practices reveal a system struggling with conceptual clarity and operational coherence. Trainers frequently conflated instructional activities with assessment tasks, reflecting limited assessment literacy. For example, discussions, quizzes, and demonstrations were described as assessment tools, suggesting that trainers lacked a clear distinction between learning processes and competency evaluation. This conflation points to a more profound systems-level weakness: the institution has not established structured assessment frameworks aligned with CBET principles. From a Curriculum Implementation Theory (CIT) perspective, such gaps undermine implementation fidelity because trainers cannot validly measure the competencies the modularised curriculum is designed to develop.

The absence of detailed and structured assessment planning further reinforces the lack of assessment literacy. The observation notes confirmed that the VTI had only one general assessment plan per department, with no differentiation between formative and summative assessment. This weak institutional planning environment perpetuates inconsistent assessment practices and contributes to the misalignment between teaching, learning, and competency evaluation.

These conceptual weaknesses are compounded by significant structural mismatches that disrupt the learning cycle. A critical logistical flaw was identified in the misalignment of academic calendars, where trainers reported: "We train following a termly system, yet assessment is semester-based" (Participant 16, FGD-3, July 2025). The system is further strained by chronic resource constraints, with plenary session data highlighting *"delayed end of module assessment and funding for real-life project"* (FGD-3 plenary session, July 2025). Together, these issues in planning, scheduling, and funding create an assessment environment that lacks the consistency and validity required for effective competency-based evaluation.

Discussion

This study explored the readiness of trainers at Regil Vocational Training Institute to implement Uganda's modularised Competence-Based Education and Training (CBET) curriculum. The findings reveal that while most trainers met formal qualification requirements, their functional readiness was significantly limited by gaps in pedagogy, assessment literacy, and institutional support systems, which were also identified in earlier studies (Muthuri, 2023; Kipkoech et al., 2024; Kidega et al., 2024).

The lack of structured exposure to CBET-specific pedagogy, such as learner-centred instruction and performance-based assessment, prevented effective curriculum delivery. Trainers often conflated academic qualifications with pedagogical readiness, a misconception also found in studies from Kenya and Uganda, where qualifications do not always correlate with instructional competence (Kasirye, 2023; Nambusi

& Kisubi, 2024). This disconnect reflects broader implementation issues that go beyond individual trainer deficits.

From a theoretical perspective, CIT explains how such failures stem from misalignment between reform intentions and implementation conditions. CIT holds that for reforms to be enacted effectively, implementers must be equipped with appropriate tools, knowledge, and institutional environments (Gross et al., 1971). At Regil VTI, inadequate training, limited access to ICT tools, and weak curriculum guidance disrupted the fidelity of CBET delivery. This aligns with evidence from Muthoka and Mbirithi (2025), who similarly found that many teachers struggled to interpret and implement competence-based approaches owing to insufficient preparation.

Infrastructure gaps further constrained readiness. While the Agriculture Department benefited from existing resources, other trades like Electricity, Auto-Mechanics, and Fashion and Design lacked essential equipment and dedicated workshop space. Observations confirmed that several trades operated with obsolete tools, temporary structures, and poor instructional resources, conditions widely reported across Ugandan TVET institutions (Ankunda et al., 2024; Mutebi & Ferej, 2023). These disparities created uneven readiness and undermined the hands-on learning that CBET requires.

Such institutional disparities are well-explained by Institutional Theory, which highlights how change is often shaped by the interplay between formal rules, professional norms, and internalised beliefs (Scott, 2014). While national policy mandates CBET adoption (MoES, 2019; 2025), institutional norms and trainer beliefs have not shifted accordingly. Trainers often viewed modularisation as a technical adjustment rather than a pedagogical transformation, echoing what Dambudzo (2018) describes as "surface-level compliance" in reform implementation-institutional routine, such as legacy assessment plans and outdated instructional habits that persisted despite policy change.

Assessment practices at Regil VTI further illustrate these challenges. Trainers lacked clarity in differentiating between instructional activities and formal assessment tasks, and few used CBET-aligned tools such as rubrics or workplace-based evaluations. These issues have been

documented elsewhere in Uganda, where assessments remain overly cognitive, certificate-driven, and detached from real-world competencies (Namubiru et al., 2024; Yiga, 2022; Yusop et al., 2023). Trainers also reported structural misalignments, such as assessment calendars that did not match teaching schedules, and delays in project funding – issues that degrade assessment integrity.

These findings suggest that CBET readiness must be understood as a systemic issue, not just a function of individual trainer ability. Institutions must be supported with clear guidelines, assessment tools, capacity-building programmes, and infrastructure investment. This echoes broader regional studies that highlight the need for whole-system reform rather than isolated interventions (Hauuanga, 2023; Kipkoech et al., 2024). Encouragingly, some trainers demonstrated adaptive behaviour, using mobile applications, virtual platforms, and peer support to fill instructional gaps. While these efforts are commendable, they also reveal the pressure on individual trainers to compensate for systemic weaknesses. Similar resilience has been reported in studies by Papier and Mawoyo (2024), who argue that informal innovations often mask deeper institutional shortcomings.

Conclusively, this study supports the growing view that CBET implementation challenges in Uganda are rooted in institutional misalignment, inadequate support systems, and fragmented reform strategies. Addressing these issues requires action at multiple levels. At the trainer level, CPD must move beyond generic workshops to provide practical, modularised pedagogy and assessment training. At the institutional level, schools must be equipped with standardised tools, trade-specific resources, and administrative coherence. At the policy level, implementation strategies must consider institutional capacity, calendar alignment, and sustained support, and not just curriculum rollout.

Conclusion

This study shows that qualification alone is not enough to predict functional readiness for modularised CBET. Its main contribution demonstrates that CBET readiness in Uganda is not just a matter of

individual trainer competence but a systemic institutional capability problem rooted in misalignment between curriculum expectations, institutional resources, and assessment regimes. Therefore, CBET reforms in Uganda should shift from solely upgrading teacher qualifications to developing whole-institution readiness ecosystems, which enhance assessment literacy, industry partnerships, digital capacity, and CBET-focused CPD. This study, therefore, reframes CBET implementation readiness as a structural capacity challenge rather than a trainer deficit issue.

Recommendations

We recommend:

For infrastructure and instructional materials

(i) Create a phased infrastructure plan with prioritisation as indicated in this order:
   a) Completing classroom floors and windows.
   b) Establishing one central computer lab with internet.
   c) Building dedicated workshops for the most deficient trades (EI, Automotive).

(ii) Establish a resource centre and systematise the sharing of successful local instructional aids like models and virtual sites from trades like AG to all other departments to ensure equitable access.

For trainer CBET competence

(i) Mandatory foundational CBET orientation: UVTAB must deliver compulsory training that explicitly contrasts CBET pedagogy with previous curricula to directly address negative trainer mindsets.

(ii) Launch peer mentoring: VTI administration should formally pair trainers from competent trades with those from struggling trades for hands-on coaching in CBET techniques.

For CBET assessment readiness

(i) Provide standardised assessment blueprints: UVTAB must issue detailed guides per module, specifying the exact tools, criteria, and weighting for all formative and summative assessments to ensure consistency.

(ii) Align academic and assessment calendars: VTI administration must immediately synchronise the internal termly schedule with the external UVTAB semester-based assessment cycle.

(iii) Deliver assessment literacy training: This should be done through targeted workshops focused solely on creating and using CBET-specific assessment tools, for example, rubrics and competency checklists.

(iv) UVTAB pilots all new curricula and ensures comprehensive orientation of trainers and trainees prior to large-scale implementation.

Further Research

Future studies should examine CBET implementation across multiple VTIs in Uganda to capture broader variations in trainer readiness, curriculum coherence, and industry collaboration.

Limitations

This study used a qualitative approach with 19 participants from a single VTI. The results may not be generalised to other settings. Data collection and interpretation relied on the researchers' perspectives. To reduce bias, the team included experts in constructivist, transformative, psychological, and philosophical approaches. Multiple data collection methods also improved accuracy. The study was descriptive and exploratory and did not establish causal relationships. The findings depended on the participants' recollection and willingness to share. Thus, the researchers explained the study objectives and maintained participant engagement throughout data collection.

References

Agole, P. (2022). *Confronting the challenges of university technical vocational education and training in Uganda*. ResearchGate. https://www.researchgate.net/publication/378798395_Confronting_the_Challenges_of_University_Technical_Vocational_Education_and_Training_in_Uganda

Ankunda, T., Ouma, P., & Wanjala, K. B. (2024). An exploration of the factors affecting skills development amongst trainees of building and civil engineering in technical and vocational institutions in Uganda. *Journal of Research & Method in Education, 14*(5), 58–74.

Arinaitwe, D. (2021). Practices and strategies for enhancing learning through collaboration between vocational teacher training institutions and workplaces. *Empirical Research in Vocational Education and Training, 13*(1). https://doi.org/10.1186/s40461-021-00117-z

Ayton, D., Tsindos, T., & Berkovic, D. (2023). *Qualitative research: A practical guide for health and social care researchers and practitioners*. Monash University. https://doi.org/10.26180/23614061.v1

Braun, V., & Clarke, V. (2023). Toward good practice in thematic analysis: Avoiding common problems and becoming a knowing researcher. *International Journal of Transgender Health, 24*(1), 1–6. https://doi.org/10.1080/26895269.2022.2129597

Chen, X., & Pan, L. (2024). Digital transformation of EdTech and pedagogy in TVET. In *Digital transformation in global TVET: Methodology and practices* (pp. 104–124). Springer.

Clément, P. (2023). The introduction of competence-based education into compulsory school curriculum in France: Hybridity and polysemy as conditions for change. In L. M. Landowski & S. M. dos Santos (Eds.), *Contextualizing global flows of competency-based education* (pp. 16–32). Routledge.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.

Dambudzo, I. I. (2018). Competence based education and training for social-economic transformation. *Advances in Social Sciences Research Journal, 5*(3), 83–94. https://doi.org/10.14738/assrj.53.3867

Gross, N., Giacquinta, J. B., & Bernstein, M. (1971). *Implementing organizational innovations: A sociological analysis of planned educational change*. Harper & Row.

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching, 8*(3), 381–391. https://doi.org/10.1080/135406002100000512

Hauuanga, L. P. (2023). *Competency-based education and training for technical and vocational education training in Namibia: An evaluation of the technical teacher-training programme* [Doctoral dissertation, University of the Free State]. http://scholar.ufs.ac.za/handle/11660/12424

Kachope, G., Nyakato, V. N., & Mwesigye, A. (2025a). Effectiveness of competence-based curriculum (CBC) implementation in the lower secondary schools: Teachers' perspective in Rukungiri District, Southwestern Uganda. *Journal of Research Innovation and Implications in Education, 9*(2), 1060–1067. https://www.jriiejournal.com/effectiveness-of-competence-based-curriculum-cbc-implementation-in-the-lower-secondary-schools-teachers-perspective-in-rukungiri-district-southwestern-uganda/

Karuhanga, I., & Muhwezi, M. (2025). Impact of assessor training on quality of training and assessment in vocational education and training in Uganda. *International Journal of Vocational and Technical Education, 17*(1), 1–15. https://doi.org/10.5897/IJVTE2025.0329

Kasirye, R. (2023). Learning experiences and perceived competencies to integrate instructional technology among pre-service teacher trainees at Busitema University. *The Uganda Higher Education Review, 10*(2), 182–205. https://files.eric.ed.gov/fulltext/EJ1413573.pdf

Kidega, C. A., & Obbo, R. (2024). Resource constraints and curriculum implementation: A Ugandan case. *East African Review of Education, 12*(2), 102–115. (DOI not available.)

Kidega, C., Song, Z., Ugochinyere, I. C., & Ndikubwimana, F. (2024). Confronting challenges facing teachers in implementing competency-based curriculum in Uganda: A case of secondary schools in Gulu City. *International Journal of Educational Research and Development, 5*(1), 45–59. https://doi.org/10.37284/eajes.7.2.1891

Kipkoech, G., Nyerere, J., Muthima, P., & Okoko, J. (2024). Vocational instructor preparedness for provision of competency-based training in Kenya and apprenticeship training in Saskatchewan, Canada. *Journal of the Kenya National Commission for UNESCO, 5*(1), 1–15. https://doi.org/10.62049/jkncu.v5i1.226

Ministry of Education and Sports. (2025). *The Technical Vocational Education and Training Act, 2025*. Republic of Uganda. (No DOI available.)

Mutebi, R., & Ferej, A. (2023). A review of TVET quality assurance practice in Uganda. *East African Journal of Interdisciplinary Studies, 6*(1), 182–196. https://doi.org/10.37284/eajis.6.1.1327

Muthoka, J. M., & Mbirithi, D. M. (2025). Teachers' preparedness and its effect on the implementation of competency-based curriculum in public primary schools in Taita Taveta County, Kenya. *International Academic Journal of Social Sciences and Education, 2*(4), 69–76. https://iajournals.org/articles/iajsse_v2_i4_69_76.pdf

Muthuri, A. K. (2023). *Determinants of implementation of competency-based education and training in technical and vocational institutions in Meru County* [Doctoral dissertation, University of Eldoret]. (No DOI available)

Mwashighadi, M. P., & Kitainge, K. (2023). Availability of competence-based teaching/learning materials, tools, and equipment at Kenya's coastal region TVET institutions. *African Journal of Education, Science and Technology, 7*(3), 479–488. (No DOI available)

Nambusi, A., & Kisubi, E. C. (2024). An evaluation of teachers' readiness to implement the learner-centered curriculum in Central Region of Uganda. *International Journal of Academic Pedagogical Research, 8*(4), 100–106. (No DOI available.)

Namubiru, A., Kisembo, M., Kasiita, T., Kagambe, E., & Kasiita, T. (2024). Perceptions of teachers on the implementation of the competence-based curriculum in secondary schools in Bundibugyo and Ntoroko Districts, Uganda. *African Journal of Education and Practice, 10*(1), 85–99. (No DOI available.)

National Planning Authority. (2024). *Strategic direction for the Fourth National Development Plan (NDPIV) 2025/26–2029/30.* Uganda. (No DOI available.)

Niyonasenze, S., Nzabalirwa, W., & Nizeyimana, G. (2024). Building trainer competencies and skills for quality training delivery. *Advances in Physical Education, 14*(3), 345–359. https://doi.org/10.4236/ape.2024.143008

Nsengimana, V. (2021). Implementation of competence-based curriculum in Rwanda: Opportunities and challenges. *Rwandan Journal of Education, 5*(1), 129–137. (No DOI available.)

Okumu, I. M., & Bbaale, E. (2019). Technical and vocational education and training in Uganda: A critical analysis. *Development Policy Review, 37*(6), 735–749. https://doi.org/10.1111/dpr.12386

Onyango, V. A. (2023). *Assessment of the preparedness of TVET institutions for the implementation of competency-based education and training in mechanical engineering courses in selected counties, Kenya* [Doctoral dissertation, University of Eldoret]. (No DOI available)

Papier, J., & Mawoyo, M. (2024). What does 'quality teaching and learning' mean in TVET contexts? *Journal of Vocational, Adult and Continuing Education and Training, 7*(2), 76–97. http://doi.org/10.14426/jovacet.v7i2.419

Seung Il, N. (2021). *Technical and vocational education trends and issues in Korea*. In *Trends and issues in international technical and vocational education in the Indo-Pacific region* (pp. 186–492). National Taiwan Normal University. (DOI not available.)

Tshong, K. P., & Yasin, R. M. (2023). TVET educational learning strategies and their impact on students: A systematic literature review. *International Journal of Academic Research in Business and Social Sciences, 13*(11), 1790–1813. (No DOI available)

Turyatemba, E. B. (2023). *The evaluation of the implementation of real-life project-based learning for competence development of TVET trainees in Uganda* [Doctoral dissertation, University of Eldoret]. (No DOI available)

United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development (A/RES/70/1)*. https://sdgs.un.org/2030agenda

Wambi, B. N., & Nalweyiso, H. (2024). ICT integration in CBC; A cross-national study. *Uganda-Kenya Education Bulletin, 11*(1), 17–29. (No DOI available)

Yiga, S. (2022). *Assessment methodologies and determinants of employability and skills level among Technical and Vocational Education Training (TVET) graduates in Central Uganda. International Journal of Vocational and Technical Education, 14*(2), 40–47. https://doi.org/10.5897/IJVTE2022.0266

Yusop, M. R. S., Rasul, S. M., Yasin, M. R., & Hashim, U. H. (2023). Identifying and validating vocational skills domains and indicators in classroom assessment practices in TVET. *Sustainability, 15*(6), 5195. https://doi.org/10.3390/su15065195

Yusvana, R. (2025). Addressing the skills gap in technical and vocational training for sustainable socio-economic growth and development. *International Journal of Research and Innovation in Social Science, 9*(1), 3111–3125. http://dx.doi.org/10.47772/IJRISS.2024.803474