Formal and Informal Routes to Learning Textiles and Garment Construction in Tanzania: A Critical Narrative Review

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Abstract.

Young Tanzanians learn tailoring and garment construction in secondary schools, in Vocational Education and Training Authority (VETA) centres and, very often, as apprentices in informal workshops. Policy documents assume that these routes can be connected, yet the evidence about how each one teaches, whom it reaches and what it produces has not been brought together. To compare formal and informal routes on three dimensions: how teaching and learning are organised, who can gain access, and what learning and labour-market outcomes have been reported. A critical narrative review following the SANRA criteria. Fourteen verified sources published between 2015 and 2026 were synthesised: six empirical studies, four policy or curriculum documents and four agency or sector reports. A 2020 to 2026 window applied, with a stated exception for the only sector skills analysis and for the curriculum documents in force. Evidence was charted against eleven comparison domains and coded as direct Tanzanian evidence, regional or international evidence, statements of policy intent or theoretical inference. Situated learning theory framed the analysis of pedagogy; Social Cognitive Career Theory and Bourdieu's concept of capital were used for choice and recognition. No source compared formal and informal learners on a common measure. The sources more often described formal provision in terms of sequenced content, safety, assessment and recognised awards, and informal apprenticeship in terms of real orders, customer contact and enterprise skills. Constraints were reported on both sides: equipment and practical time in schools, and uneven coverage, weak assessment and poor recognition in workshops. Neither route can be shown to be superior. The review proposes a provisional hybrid model that combines workplace learning, short structured modules and recognition of prior learning, and sets out the outcomes against which pilots should be evaluated.

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1. Introduction

Textiles and garments have long been named in Tanzania's industrial plans as a source of employment and value addition (Ministry of Finance and Planning [MoFP], 2021). Much of the work in this sector is done by small tailoring businesses, and much of the skill is acquired outside schools. Formal provision exists at two levels. Ordinary secondary schools teach Textiles and Garment Construction under a competence-based syllabus developed by the Tanzania Institute of Education (TIE, 2023), with candidates examined by the National Examinations Council of Tanzania (NECTA, 2021). VETA centres train school leavers and adults in dressmaking and related trades. Alongside both, young people learn the trade by working in a tailor's workshop under an experienced artisan, usually without a contract or certificate (Kirsch & Okal, 2021).

Policy now asks these routes to work together. The Education and Training Policy 2014, 2023 Edition, commits the government to recognising competences acquired outside formal institutions (Ministry of Education, Science and Technology [MoEST], 2023), and the education sector plan for 2025/26 to 2029/30 emphasises practical skills and closer links to employers (MoEST, 2025). Designing such links requires an understanding of what each route does well and badly. The available research tends to address formal TVET (George, 2025; Massi et al., 2026) or informal apprenticeship (Kirsch & Okal, 2021; Hofmann et al., 2022) separately, and none of it focuses on garment construction in a way that allows a direct comparison.

This review addresses that gap. It does not claim that one route is better. Its aim is to set out, domain by domain, what the evidence says about each route, how strong that evidence is, and where comparisons cannot yet be made. The review asked three parallel questions:

RQ1. How are teaching and learning organised in formal and informal garment-construction training in Tanzania?

RQ2. Who can gain access to each route, and on what terms?

RQ3. What learning and labour-market outcomes have been reported for each route, and can they be compared?

2. Definitions and context

Terms are used as follows. **Formal provision** means programmes with an approved curriculum, qualified instructors, planned assessment and a recognised award. In Tanzania it has two distinct parts that should not be merged: secondary-school Textiles and Garment Construction, which is a subject within general or vocational secondary education, and VETA programmes, which are occupational courses for school leavers and adults. **Informal apprenticeship** means learning a trade by working in an enterprise under an experienced practitioner, with terms agreed locally and no formal award (Kirsch & Okal, 2021). In Tanzania the master tailor is commonly called a *fundi*, and that local term is preferred here to regional labels such as *jua kali*, which comes from Kenya and does not map neatly onto Tanzanian workshops. **Competence-based training** means teaching and assessment organised around observable performance standards. **Recognition of prior learning (RPL)** means the assessment and certification of competence acquired outside formal programmes, which Tanzanian policy has endorsed (MoEST, 2023; Kirsch & Okal, 2021).

3. Theoretical framework

Situated learning theory is the main lens, because the central question is how garment-construction skill is learnt. Lave and Wenger (1991) describe learning as participation in a

community of practice. Newcomers begin with peripheral but real tasks and take on more central work as their competence grows. This fits apprenticeship closely, but it also applies to schools: workshops, projects and industry placements are attempts to bring situated practice into formal settings.

Two further lenses are used more narrowly. Social Cognitive Career Theory (Lent et al., 1994) explains how self-efficacy and expected outcomes affect choice of route and persistence within it. It is used in the analysis of access. Bourdieu's (1986) distinction between embodied and institutionalised cultural capital helps to explain why skill learnt in a workshop may be real but poorly recognised by employers or institutions, while a certificate may be recognised even when practical skill is limited. It is used in the analysis of credentials and recognition. None of the three theories was tested; they guided the choice of comparison domains and the interpretation of patterns.

4. Methods

4.1 Design

This study is a critical narrative review. It does not claim to be a systematic review or to follow the PRISMA guidelines. Instead, the review was structured in accordance with the six criteria of the Scale for the Assessment of Narrative Review Articles (SANRA) (Baethge et al., 2019), which provide an appropriate framework for narrative reviews addressing questions that require critical interpretation and synthesis of evidence from heterogeneous sources (Greenhalgh et al., 2018).

4.2 Eligibility and source handling

Sources were eligible if they addressed garment construction, tailoring, or textile training in Tanzania, or Tanzanian technical and vocational education and training (TVET) or apprenticeship more broadly, particularly where they examined pedagogy, access, participation, skills development, or learning and employment outcomes. Regional and international sources were included only where they provided relevant comparative evidence on informal apprenticeship or related training systems, including evidence applicable to Tanzania. The primary date window was 2020–2026. Two pre-specified exceptions were permitted: the VETA (2015) skills analysis, which was the only identified sector-specific analysis of textiles and apparel, and curriculum and examination documents that were currently in force, irrespective of their publication date. All included sources were required to have verifiable bibliographic details

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4.3 Charting, appraisal and synthesis

Each source was charted by type, setting, route covered, participants and findings. Evidence was coded into four classes: **D**, direct empirical evidence from Tanzania; **R**, regional or international empirical evidence; **P**, policy or curriculum documents describing intended provision; and **T**, theoretical inference. Empirical studies were appraised for the clarity of sampling and the fit between design and claims. Policy documents were not scored for quality, because they describe intentions rather than test them.

Findings were synthesised against eleven comparison domains fixed before the evidence was charted: pedagogy, setting, duration, assessment, credential, equipment, trainer preparation, market exposure, access and cost, equity, and reported outcomes. Comparative statements are worded as descriptions of what the sources reported, not as judgements of effectiveness. The author works at TIE, which develops the secondary syllabus; formal-route documents were therefore treated as statements of intent and checked against implementation evidence wherever it existed.

5. Results

5.1 The sources

Table 1 lists the fourteen sources. Six were empirical, but only three of these addressed vocational learning in Tanzania directly and none was specific to garment construction. One empirical source was a multi-country meta-study. Four were policy or curriculum documents and four were agency or sector reports. No source compared formal and informal learners on a shared measure.

Table 1. Characteristics of the included sources

Source	Class	Route covered	Focus and main contribution
TIE (2023)	P	Secondary school	Competence-based syllabus: materials, tools, safety, design, construction, entrepreneurship
NECTA (2021)	P	Secondary school	Item response analysis of Textiles and Dressmaking candidates; areas of strong and weak performance
MoEST (2023)	P	All	Policy commitment to two secondary streams and to recognising competence gained outside institutions
MoEST (2025)	P	All	Sector plan priorities: practical skills, teacher capacity, industry links
MoFP (2021)	P	All	Textiles and garments named as an industrial priority
VETA (2015)	R*	VETA	Skills analysis of the textile and apparel industry; gaps between training and industry needs
Massi et al. (2026)	D	Formal VET	Curricula weak on soft and digital skills relative to labour-market demand
George (2025)	D	Formal VET	394 graduates: most valued employment skills; a substantial minority wanted reform
Nkunya & Mwila (2024)	D	Formal VET	Dar es Salaam centre: practical exposure and industry links associated with preparedness
Swai & Burton (2025)	D	Secondary school	Rural Iringa: positive views; few practical sessions; scarce materials
Kabuje & Ntawigaya (2025)	D	Secondary school	Teacher competence, infrastructure and status shape implementation
Kirsch & Okal (2021)	D*	Informal	ILO case study of informal apprenticeship and its weak links to recognition in Tanzania
Hofmann et al. (2022)	R	Informal	ILO meta-study of informal apprenticeship systems, including Tanzania
UN Women (2024)	P*	All	Gender profile: constraints on women's education, assets and enterprise

Note. D, direct Tanzanian evidence; R, regional or international evidence; P, policy, curriculum or national profile; an asterisk marks agency or sector reports. No source was specific to the comparison of formal and informal garment-construction learning.

5.2 How teaching and learning are organised (RQ1)

In formal provision the syllabus sets out a sequence of competences that run from tools, materials and safety through pattern work and construction to design and entrepreneurship, and it expects demonstration, guided practice, projects and practical assessment (TIE, 2023). The syllabus is a statement of intent. Studies of implementation in Tanzanian secondary schools report that practical sessions are fewer than planned and that materials and equipment are often scarce (Swai & Burton, 2025; Kabuje & Ntawigaya, 2025). Teacher competence and preparation were identified as decisive for whether practical work happened at all (Kabuje & Ntawigaya, 2025). The NECTA (2021) item analysis shows which parts of the assessed syllabus candidates handled well or poorly. That evidence describes assessed outcomes for one

cohort; it says nothing about informal learners and cannot be traced to a particular teaching method.

In informal apprenticeship, learning is organised around the work of the business. The ILO case study describes learning through observation, demonstration, supervised practice and gradually increasing responsibility in enterprises (Kirsch & Okal, 2021). The cross-country meta-study found that practices, duration and terms vary widely between trades and workshops (Hofmann et al., 2022). In situated-learning terms, the apprentice moves from peripheral to central participation, and what is learnt depends on the orders the workshop receives (Lave & Wenger, 1991). This gives learning a direct link to customers, time and cost, but it can leave gaps where certain fabrics, techniques or machines are not encountered.

5.3 Access and terms of participation (RQ2)

Formal routes require prior schooling and, for VETA, fees and admission to a centre. Informal apprenticeship is usually entered through personal networks, with terms negotiated with the master and sometimes involving payment in cash or labour (Kirsch & Okal, 2021; Hofmann et al., 2022). The ILO meta-study also reports decent-work concerns in informal apprenticeship, including long hours and weak protection for young apprentices (Hofmann et al., 2022).

Gender is central in this trade but poorly documented. The Tanzania Mainland gender profile records persistent constraints on women's education, assets and enterprise (UN Women, 2024). Tailoring is a common livelihood for women, yet none of the included studies reported participation, conditions or outcomes for women and men separately in either route. It cannot be assumed that women choose informal apprenticeship for the same reasons, or that workshops are uniformly open or closed to them. In SCCT terms, cost, household responsibilities and access to networks act as contextual barriers that may push groups towards one route, but this remains untested.

5.4 Reported outcomes (RQ3)

Outcome evidence exists only for formal VET and only as self-report. In a national survey, most of 394 vocational graduates said that vocational education gave them essential employment skills, while a substantial minority called for closer alignment with the labour market (George, 2025). At the Dar es Salaam regional centre, training outcomes were associated with graduates' preparedness, and practical exposure and industry links were identified as important (Nkunya & Mwila, 2024). Curricula were reported to give limited attention to soft and digital skills (Massi et al., 2026), and the sector analysis identified gaps between training content and industry needs in textiles and apparel (VETA, 2015). For informal apprenticeship, no Tanzanian source reported measured skill, earnings or business survival. The earlier version of this paper stated that informal apprentices were more likely to start businesses and that apprenticeship combined with schooling was more productive than VETA training; neither claim could be traced to a verifiable source, and both have been removed.

5.5 Comparison matrix

Table 2 brings the evidence together. Each cell states what the sources report and the class of evidence behind it. A dash indicates that no included source addressed the domain for that route.

Table 2. Formal and informal routes compared across eleven domains

Domain	Secondary school	VETA centre	Informal apprenticeship
Pedagogy	Demonstration, guided practice, projects (P); practical work often reduced (D)	Competence-based practical training (P); practical exposure valued (D)	Observation, imitation, supervised practice, graduated tasks (D, R)
Setting	School workshop or classroom (P, D)	Training centre workshop (P)	Working tailoring business (D, R)

Domain	Secondary school	VETA centre	Informal apprenticeship
Duration	Fixed by school calendar (P)	Fixed by course (P)	Negotiated; varies widely (R)
Assessment	Continuous and national examination (P)	Trade testing (P)	Judgement of the master during production (D, R)
Credential	Secondary certificate; NVA levels (P)	Recognised trade award (P)	None, unless assessed through RPL (D, P)
Equipment	Often scarce (D)	Some gaps relative to industry (R*)	Whatever the workshop owns (R)
Trainer preparation	Teacher competence uneven (D)	Not addressed	Depends on the master's skill and willingness to explain (R)
Market exposure	Limited (D)	Limited industry links (D)	Daily contact with customers and orders (D, R)
Access and cost	Requires schooling (P)	Fees and admission (P)	Networks; negotiated payment (D, R)
Equity	–	–	Decent-work concerns for young apprentices (R); gender undocumented
Reported outcomes	Examination performance for one cohort (P)	Self-reported employability (D)	–

Note. D, direct Tanzanian evidence; R, regional or international; R*, sector report predating the date window; P, policy or curriculum intent. NVA, National Vocational Award; RPL, recognition of prior learning.

6. Discussion

6.1 What the comparison shows

The sources more often described formal provision in terms of sequence, standards, safety and recognised awards, and informal apprenticeship in terms of real orders, customers and enterprise. That contrast is real, but it is a contrast in design, not in demonstrated results. Formal strengths depend on implementation, which the Tanzanian studies show to be weak in practical work (Swai & Burton, 2025; Kabuje & Ntawigaya, 2025). Informal strengths depend on the individual master, the variety of the workshop's work and its equipment (Hofmann et al., 2022). The matrix also shows where the evidence is thinnest: outcomes of informal learning, trainer preparation in VETA, and anything about equity in either route.

Situated learning theory explains why the routes are complementary rather than competing. Each supply something the other lacks. Schools can sequence concepts and make standards explicit, but they struggle to provide authentic participation. Workshops provide authentic participation but rarely make principles explicit or ensure coverage. Bourdieu's distinction adds a point about recognition: the apprentice may accumulate embodied capital that is invisible to employers and institutions, while the school leaver may hold institutional capital that overstates practical competence (Bourdieu, 1986). RPL is, in effect, a mechanism for converting the first into the second, which is why its design and credibility matter.

6.2 Comparison with international evidence

These patterns are consistent with the ILO's cross-country analysis, which describes informal apprenticeship as accessible and closely tied to production but uneven in quality and weak in recognition, and which reports that upgrading programmes have tried to add structured training, standards and certification (Hofmann et al., 2022). The present review adds a Tanzanian, trade-specific view and shows how little of the comparison can yet rest on outcome data.

6.3 A provisional hybrid model

Figure 1 sets out a hybrid model derived from the strengths and constraints mapped above. It is a proposal, not a finding. Its mechanisms are supervised workplace learning for formal

students, short, structured modules in theory, safety, digital design and costing for apprentices, RPL with bridging support, and joint professional development that brings teachers, VETA instructors and experienced artisans together.

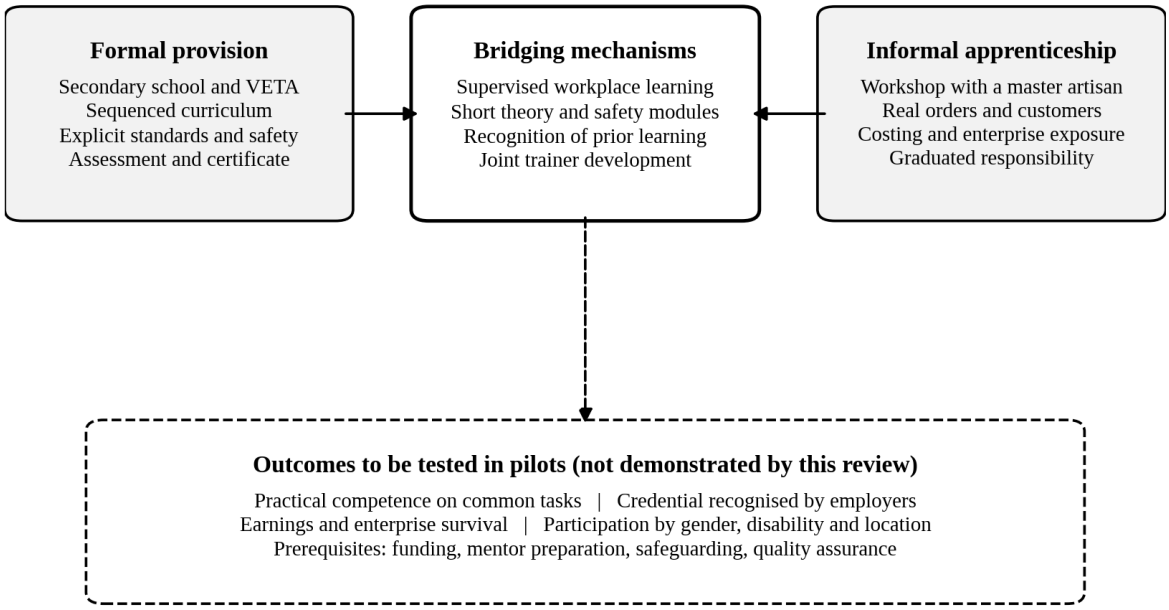


Figure 1. Provisional hybrid model for garment-construction training. Solid arrows show the contributions each route makes to the bridging mechanisms; the dashed arrow and box show outcomes that pilots would need to test.

The model has prerequisites and risks. It needs funding, trained mentors, workshop safety standards and quality assurance for RPL. Without safeguarding, placing school students in informal workshops could expose them to the decent-work problems that the ILO has documented (Hofmann et al., 2022). If RPL assessment is not trusted by employers, it will add cost without adding recognition. And if women face particular barriers to entering workshops or paying fees, a hybrid model could reproduce inequality rather than reduce it. These are reasons to pilot and evaluate before scaling up.

6.4 Limitations

Five limitations apply. First, the original search was not documented, and the update search was targeted rather than systematic, so relevant studies, especially unpublished theses and district reports, may be missing; this is likely to underrepresent evidence on informal learning, which is rarely published. Second, no source was specific to garment construction and compared both routes; most findings are transferred from broader TVET evidence. Third, policy and curriculum documents describe intentions, and including them may make formal provision appear more coherent than it is in practice. Fourth, outcome evidence was self-reported and limited to formal VET. Fifth, the formal and informal categories are permeable: many learners combine school, short courses and workshop work, and a binary comparison may hide these mixed paths.

7. Conclusion and research agenda

This review compared formal and informal routes to learning garment construction in Tanzania across eleven domains. It found a clear contrast in how the routes are designed, but no evidence

that would allow either to be judged superior. Formal provision offers sequence, standards and recognised awards but often lacks practical time and equipment. Informal apprenticeship offers authentic work and enterprise exposure but varies widely, is weakly assessed and is rarely recognised. A hybrid model that connects the two is plausible but untested.

Three kinds of research are needed. The first is multi-site observation of teaching in school workshops, VETA centres and tailoring businesses, using a common framework. The second is assessment of formal and informal learners on the same practical tasks with a shared rubric, taking account of prior schooling and selection into each route. The third is longitudinal tracking of employment, earnings and business survival, with all data reported by sex, disability and location. Pilots of the hybrid model should be designed so that they generate this evidence from the start.

Declarations

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Ethics: Not applicable. The review used published sources only.

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