



# **The Somali TVET Transformation Framework (STTF): A Demand-Driven Pathway to Centennial Vision 2060 Through a Resilient Integrated Skills Ecosystem (RISE)**

**Said Abubakar, PhD**

Mogadishu University, Somalia

Email: [said@mu.edu.so](mailto:said@mu.edu.so)

ORCID: <https://orcid.org/0000-0002-4560-185X>

DOI: [10.70595/sej122](https://doi.org/10.70595/sej122)

## **Abstract**

Somalia's Technical and Vocational Education and Training (TVET) system faces a persistent mismatch between education provision and labour-market demand at a time when the National Transformation Plan 2025–2029 and Centennial Vision 2060 place human capital at the centre of economic transformation. This article refines and critically situates the proposed Somali TVET Transformation Framework (STTF), guided by a Resilient Integrated Skills Ecosystem (RISE) architecture. It is a conceptual, policy-oriented integrative synthesis of the documentary and scholarly evidence assembled in the source manuscript and supplemented with traceable national policy and relevant peer-reviewed studies. Four mutually reinforcing domains structure the framework: Collaborative Governance Structure (CGS), Hybrid Skills Delivery Engine (HSDE), Sustainable Investment Model (SIM), and Solutions Feedback Loop (SFL). The analysis identifies five interconnected system challenges: fragmented coordination; limited labour-market alignment and equitable access; financing vulnerability; inadequate graduate and employer feedback; and poorly integrated interventions. The article specifies the causal logic, institutional responsibilities, an indicative five-phase implementation pathway, and indicators for piloting and future evaluation. Unlike an empirical impact study, this analysis does not establish that STTF has been implemented or validated. The principal contribution is therefore a testable, context-sensitive model for coordinating reform rather than evidence of program effectiveness. Further stakeholder appraisal, baseline measurement, feasibility analysis and regionally differentiated pilots are necessary before national adoption.

**Keywords:** technical and vocational education and training; Somalia; demand-driven skills; labour-market intelligence; vocational governance; skills ecosystems; RISE; Centennial Vision 2060

## **1. Introduction**

Technical and Vocational Education and Training (TVET) is an important route through which education systems can translate learning into productive employment, entrepreneurship and adaptive capabilities. Yet the existence of training centres alone does not establish a demand-driven skills system. Curriculum relevance, qualification credibility, employer participation, financing predictability and graduate transitions must operate together. Research in Kenya, Nigeria and Nepal links the employability value of vocational provision to employer participation, practice-based curricula and system coordination (Muchira et al., 2023; Otache, 2022; Shrestha, 2021).

In Somalia, the destruction of state institutions after 1991 weakened vocational provision, while decentralised state structures, non-state providers, donor projects and private firms became central to training and employment. This institutional configuration offers both opportunities and coordination challenges. The National Economic Council's education and youth-empowerment assessment documents weak TVET coordination, inconsistent standards, shortages of instructional capacity and limited employer recognition of some training credentials (Sambili & Ngeno,

2022). The Education Sector Strategic Plan (ESSP) 2022–2026 similarly identifies access, quality and regulation among reform priorities (Federal Government of Somalia, 2022).

The policy context has subsequently sharpened. Somalia's National Transformation Plan (NTP) 2025–2029 organizes reform around governance, economic transformation, social and human capital development, and environmental resilience; the plan is the first medium-term phase aligned with Centennial Vision 2060 (Ministry of Planning, Investment and Economic Development [MoPIED], 2025). Sectoral priorities in agriculture, livestock, fisheries, construction, service industries, digital activities and the green economy therefore raise a practical question: how can training providers identify changing skill needs and respond at scale without sacrificing access or public accountability?

Existing initiatives address parts of this challenge but may not yet function as one coherent national ecosystem. GIZ records confirm that its earlier Somalia TVET project operated during 2018–2024 and that a successor project runs during 2024–2027, with objectives relating to governance, quality and access (Deutsche Gesellschaft für Internationale Zusammenarbeit [GIZ], n.d.-a, n.d.-b). Such interventions provide useful building blocks, but their existence cannot by itself demonstrate the effectiveness of an integrated nationwide system.

The problem addressed here is therefore not merely a shortage of training, but the limited articulation of an institutionally feasible, feedback-responsive architecture linking decision-makers, training institutions, employers, financing actors and learners across Somalia's diverse settings. A coherent model is needed to clarify who coordinates, what is delivered, how resources flow and how results inform subsequent decisions. The article advances the author's original four-domain RISE proposal and translates it into the Somali TVET Transformation Framework (STTF), while explicitly distinguishing a conceptual recommendation from an empirically validated intervention.

### **1.1. Purpose, objectives and research questions**

The purpose is to develop a logically specified and policy-relevant conceptual framework for demand-driven TVET reform in Somalia, using a critical synthesis of established evidence and national policy documents. Specifically, the article seeks to (a) interpret systemic challenges shaping Somali TVET; (b) explain how four proposed RISE domains respond to these challenges; (c) articulate the institutional and functional relationships constituting STTF; and (d) propose a phased implementation and evaluation design. Three questions guide the synthesis: What recurrent system-level gaps are evident in the available documentary literature? How can coordinated governance, delivery, financing and feedback address those gaps? Which implementation safeguards and measurable indicators would enable future appraisal of STTF?

### **1.2. Contribution and boundary of the study**

The article contributes a context-specific integration model rather than a newly estimated effect or an independently evaluated programme. Its originality lies primarily in the configuration of four interacting functions and the explicit sequencing of reform within Somalia's federal and private-provider environment. The model is offered as a falsifiable policy proposition. Empirical confirmation will depend on stakeholder endorsement, institutional mapping, transparent financing data, baseline labour-market information and comparative pilots.

## **2. Literature and Conceptual Foundations**

### **2.1. Human capital development and demand-driven TVET**

Human capital perspectives treat skills acquisition as an investment that can raise individual productivity and support economic development. However, the return to training depends on demand for skills, employment opportunities and institutional quality; qualifications do not automatically translate into jobs. A demand-driven model therefore begins with current and anticipated occupational requirements, involves employers throughout programme design and assessment, and continually revises its training offer. Evidence from Kenya indicates that inadequate equipment, limited practical training and weak industry linkages constrain curriculum relevance (Muchira et al., 2023). Nigerian

evidence likewise emphasises collaboration between employers and vocational institutions, including joint curriculum review and workplace exposure (Otache, 2022).

Industrial participation has several dimensions. Employers can help specify occupational standards, offer apprenticeships, assess competencies and provide signals about emerging technologies. Such involvement should not mean that short-term employer preferences entirely determine curricula: foundational literacy, numeracy, communication, digital competence, entrepreneurial capability, occupational safety and environmental stewardship retain long-term value (Hussain et al., 2021; Kamaruzaman et al., 2025). The policy challenge is to reconcile occupational responsiveness with lifelong learning and inclusive access.

## **2.2. Governance and coordination in plural TVET systems**

Where federal authorities, member-state institutions, NGOs, private providers and donors share responsibilities, a common qualifications language and agreed quality-assurance rules can reduce duplication without requiring rigid centralisation. The Somali National Economic Council describes coordination and regulatory gaps that affect provider recognition and accreditation (Sambili & Ngeno, 2022). Governance arrangements should therefore recognise differentiated statutory mandates, clarify accreditation and financing responsibilities, and include representation from training providers, learners and employers. The proposed Collaborative Governance Structure is not an assertion that existing institutions must be displaced: its design should first map and strengthen lawful structures and avoid creating parallel authority.

## **2.3. Hybrid and competency-based skills provision**

The second conceptual foundation is a flexible training system that can combine competency-based curricula, industry placements, modular credentials, instructor development and appropriate face-to-face/digital delivery. Innovative teaching approaches may strengthen practical skills and improve adaptability, but require equipment, electricity, connectivity, safeguards and qualified instructors (Varma & Malik, 2023). Studies examining artificial intelligence and other emerging technologies in vocational education suggest opportunities for new forms of training and assessment; such opportunities do not remove the need for hands-on learning in trades and other practical occupations (Onyango & Kelonye, 2022).

In Somalia, an equitable hybrid design should differentiate urban access conditions from remote and crisis-affected settings. Blended provision must not become a hidden requirement for learners who lack devices, electricity or connectivity. Female learners and people with disabilities may require supportive schedules, safe transport, accessibility adaptations and targeted scholarships. Training plans should respond to employer needs while preserving transferable capacities that enable workers to change jobs and sectors. Evidence from a Japanese-language TVET programme in Bangladesh also illustrates the potential value of combining vocational training with occupationally relevant communication skills (Alam & Sharmin, 2023).

## **2.4. Financing as a condition of resilience**

Fragmented, short-term funding can prevent vocational institutions from maintaining workshops, procuring equipment and employing qualified instructors. Research on TVET financing in Nepal describes the interaction of fiscal arrangements, public budgets, equity, intergovernmental coordination and external support (Aryal, 2020). The consequences of funding instability for organisational operations are also documented in qualitative research on vocational institutions (Mack, 2024). In Somalia, a viable financing approach requires explicit public responsibilities, financial transparency and realistic assessments of contribution capacity among small firms rather than assuming that private levies can be imposed easily.

The source framework includes Islamic social finance, particularly waqf, as one potential source of long-term skills investment. Published research identifies waqf as a possible mechanism for TVET research and innovation financing (Kamaruzaman et al., 2024). Such options remain proposals until tested for legal feasibility, fiduciary arrangements, governance, asset management, and alignment with public budgets. The financing pillar should therefore be judged by recurrent cost coverage and accountability, not solely by the variety of nominal funding sources.

## 2.5. Labour-market information and continuous improvement

The fourth foundation is a feedback mechanism joining training supply to labour-market demand. An effective labour-market intelligence system would combine vacancy and occupational-trend information, employer surveys, provider data, student completion records and tracer studies of graduate employment. These sources reveal different aspects of demand and should not be treated as interchangeable. Feedback is useful only when institutions act on it: responsible bodies need authority to amend curricula, redistribute funding, change recruitment priorities and retire ineffective programmes. Evidence on skills gaps in Tanzania and Oman reinforces the need to evaluate the alignment of educational outcomes with labour-market requirements (Al Shuaili, 2025; Nkunya & Mwila, 2024).

## 2.6. Why an integrated model is required?

Each domain can function in isolation yet still fail systemically. A well-funded training centre may graduate learners for occupations in limited demand; useful employer surveys may never affect approved curricula; central standards may not be implemented by under-resourced institutions; and inclusive enrolment targets may be undermined by unsafe placements or inaccessible facilities. RISE treats the skills sector as a coordinated ecosystem in which governance sets rules, financing enables implementation, training produces competencies and evidence leads to corrective action. This is a conceptual explanation of proposed interdependence, not an observed causal estimate.

## 3. Materials and Methods

### 3.1. Study design and methodological status

This article is a conceptual framework-development study based on a critical integrative documentary and narrative review. It revises an earlier manuscript that described its method as a “Systematic Qualitative Narrative Synthesis.” The original account names Google Scholar, Semantic Scholar and Elicit as search tools but does not retain reproducible search dates, complete search strings, source counts, deduplication records, selection decisions or a formal quality-appraisal record. Accordingly, the present article does not claim compliance with systematic-review protocols, does not invent missing screening data and makes no quantitative meta-analytic claims. Its approach is better characterised as a structured conceptual synthesis, a recognised mode of review-based theory development (Snyder, 2019; Torraco, 2005).

### 3.2. Documentary basis and analytic procedure

The documentary base comprises the national and comparative materials represented in the original manuscript, together with identified primary policy documents and relevant scholarly works whose core publication information could be checked. Principal Somalia-specific anchors are the ESSP 2022–2026; the National Economic Council’s education, health and TVET policy assessment; the NTP 2025–2029; and official GIZ descriptions of consecutive Somalia TVET projects (Federal Government of Somalia, 2022; GIZ, n.d.-a, n.d.-b; MoPIED, 2025; Sambili & Ngeno, 2022). Comparative peer-reviewed studies on curriculum alignment, employer engagement, finance and labour-market feedback inform transferability judgments rather than directly measuring Somali conditions.

Analysis proceeded through a transparent conceptual sequence in the revision: first, the originally reported sector concerns were mapped to governance, delivery, financing, information systems and integration; second, the support for each concern was compared with more clearly traceable policy and journal sources; third, the four predetermined RISE domains were used as an organising lens; and fourth, functional relationships, proposed institutional mechanisms and possible evaluation indicators were developed. This sequence is deductive and interpretative. It must not be represented as independently repeated primary thematic coding or formal source-by-source risk-of-bias assessment; thematic analysis is referenced as an analytic orientation, not as evidence of unrecorded coding events (Braun & Clarke, 2006).

### 3.3. Evidence classification and safeguards

To avoid conflating documented facts with proposals, three evidence statuses are used throughout the article. “Documented context” refers to a claim traceable to a cited policy, project or journal source. “Author synthesis” refers

to an interpretative classification of several documentary concerns. “Framework proposal” refers to an institutional or operational design that has not been field-tested. Original quantitative tables lacking a fully locatable source or denominator are preserved in Appendix A as archival material for subsequent verification, not as new results or nationally representative estimates.

### **3.4. Scope and limitations of the method**

No interviews, surveys, observations, experimental intervention or programme pilot were conducted for this revised article. It neither estimates effects on employment nor assesses implementation fidelity of the STTF. As the preserved review history is incomplete, the evidence base cannot be described as exhaustive; selection bias and publication bias may remain. Comparative experience provides analytical analogies but cannot establish direct policy transferability to Somalia. These limitations place a boundary around the conclusions and motivate the validation agenda below.

## **4. Analytical Findings: Five Interdependent Gaps**

The synthesis identifies five recurring challenges in the assembled source material. They are organised below by the problem each creates for a national skills ecosystem. The term “finding” here denotes a documentary interpretation rather than a result of newly collected participant data.

### **4.1. Fragmented governance and variable standards**

Somali TVET provision involves multiple providers and levels of authority, and documentary assessments identify weak coordination, inconsistent accreditation and limited standardisation (Federal Government of Somalia, 2022; Sambili & Ngeno, 2022). When mandates and provider registries are unclear, common standards and progression routes become harder to implement. This does not imply that every training institution lacks regulation or that all current coordination efforts have failed. Rather, it indicates a case for negotiated system-wide functions: common information standards, transparent accreditation principles and agreed minimum programme expectations.

### **4.2. Skills-delivery misalignment and unequal access**

The source literature points to outdated curricula, shortages of practical equipment, limited instructor capacity and insufficient regular employer involvement. Comparable research suggests that weak industrial links may reduce the relevance of training outputs (Hussain et al., 2021; Muchira et al., 2023). The Somali challenges are compounded by regional differences in institutional coverage, connectivity and safety, as well as barriers affecting women, rural learners and marginalised groups. Employment alignment should be measured directly through occupational assessment and tracer evidence rather than inferred solely from enrolment or graduate counts.

### **4.3. Underfinancing and limited recurrent-cost planning**

Public financing constraints and dependence on individual donor programmes create risks for sustained instructor compensation, equipment maintenance and credential quality. The ESSP calls attention to institutional strengthening, while the National Economic Council identifies high training costs and affordability obstacles (Federal Government of Somalia, 2022; Sambili & Ngeno, 2022). A proposed pooled investment instrument is one option, but its governance arrangements, legal feasibility and distributive effects require dedicated financial analysis.

### **4.4. Insufficiently connected labour-market feedback**

Employer consultations and labour-market analyses appear in parts of the existing project landscape, including the earlier GIZ programme (GIZ, n.d.-a). The problem is thus better described as insufficient institutional linkage and nationwide coverage of feedback, rather than the categorical absence of any data collection. Without consistent graduate tracking and a rule connecting evidence to programme approvals and budgets, decision-makers may struggle to adjust training portfolios to changing occupations, wages and green or digital skills requirements.

### **4.5. Isolated interventions and weak cross-pillar integration**

Projects and policies often target discrete dimensions—access, standards, modular training or infrastructure. Even when each is relevant, a whole-system implementation pathway is required to clarify dependencies, sequencing and

continuous accountability. The central proposition of STTF is that improvements in one domain are less likely to endure when the other domains are weak. This interaction is plausible in the literature but remains a hypothesis for evaluation in Somalia.

**Table 1**

*Evidence-to-gap synthesis and proposed RISE responses*

| System gap                     | Documentary basis                                                    | RISE response                                                 | Evidence status               |
|--------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------|
| Governance fragmentation       | ESSP; NEC TVET brief; GIZ programme descriptions                     | CGS: clarify mandates, standards and stakeholder coordination | Documented concern + proposal |
| Skills mismatch and exclusion  | NEC brief; comparative curriculum and employer studies               | HSDE: modular, competency-based and equitable delivery        | Documented concern + proposal |
| Funding vulnerability          | ESSP; comparative TVET financing studies                             | SIM: accountable, blended recurrent financing                 | Documented concern + proposal |
| Weak system-level feedback     | Project-level labour-market activity; comparative alignment research | SFL: interoperable LMIS and graduate tracing                  | Author synthesis + proposal   |
| Disconnected reform components | Cross-document comparison of policy and project functions            | RISE integration: governance ↔ delivery ↔ finance ↔ evidence  | Interpretative synthesis      |

*Note.* ESSP = Education Sector Strategic Plan; NEC = National Economic Council; CGS = Collaborative Governance Structure; HSDE = Hybrid Skills Delivery Engine; SIM = Sustainable Investment Model; SFL = Solutions Feedback Loop; LMIS = labour-market intelligence system. The table presents a qualitative mapping, not measured effect sizes.

## 5. Proposed Somali TVET Transformation Framework

### 5.1. Definition, boundaries and relationship between STTF and RISE

RISE is defined consistently here as the Resilient Integrated Skills Ecosystem: an analytical model comprising four interdependent functions. The Somali TVET Transformation Framework (STTF) is the national, context-specific policy and implementation proposal informed by RISE. STTF is not synonymous with a financing fund; a National Skills Innovation Fund may be one instrument within its Sustainable Investment Model. These distinctions correct a terminological ambiguity in the source manuscript. The conceptual design does not assume that a new national institution must immediately supersede existing lawful authorities.

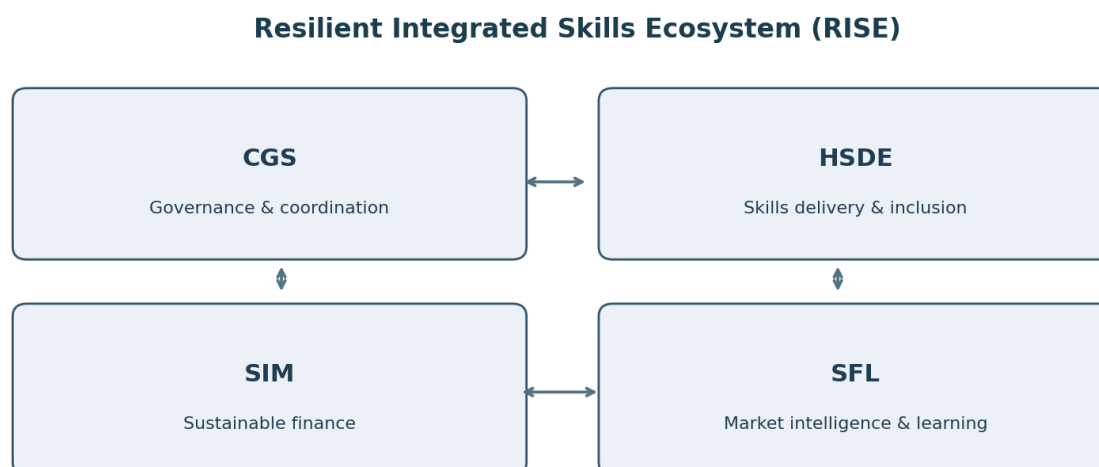


**Figure 1.** Proposed interdependence of four RISE functions. Reciprocal links indicate hypothesised coordination requirements, not measured causal effects.

### 5.2. Pillar 1: Collaborative Governance Structure (CGS)

The CGS addresses joint decision-making among federal and state authorities, competent regulatory bodies, public and private TVET providers, employer organisations, civil society, worker representatives and learners. The proposed National TVET Steering Council would serve as a coordination platform only after legal mandates and statutory competencies had been established. Its priority functions would include agreeing occupational priorities; endorsing minimum standards; negotiating equitable geographical coverage; publishing performance information; and maintaining clear channels for disputes and intergovernmental dialogue. The council should not independently issue credentials or levy funds without legally delegated authority.

Key safeguards include public terms of reference, rotating or balanced participation, conflict-of-interest disclosure, transparent decision records, gender and disability inclusion, and a mechanism for regional representation. Success would be assessed by the percentage of providers participating in a common registry, the timeliness of decisions, recognised qualification mappings and evidence of coordinated planning rather than only by whether a council formally exists.

### **5.3. Pillar 2: Hybrid Skills Delivery Engine (HSDE)**

The HSDE combines competency-based occupational standards with modular qualifications, assessed workplace experience and differentiated delivery modes. Employers and instructors should jointly specify competencies and assessment tasks in selected high-demand sectors. Short modules can permit flexible re-entry and recognition of prior learning, while longer programmes remain available where trades require extended supervised practice. Provision should integrate employability competences, literacy, numeracy, entrepreneurship, safety, digital skills and climate-responsive skills.

Quality requirements should include instructor professional development, standards for workshop equipment, authentic practical assessment, accessibility adaptations and safeguards for apprentices. Hybrid must denote a sensible combination of delivery arrangements, not compulsory online learning. Where appropriate, the proposed National Skills Innovation Fund would finance curriculum co-design and pilots subject to transparent competitive or equity-based allocation criteria.

### **5.4. Pillar 3: Sustainable Investment Model (SIM)**

The SIM envisions predictable financing for institutional development and recurrent delivery. Funding channels may include public budget allocations, earmarked development-partner resources, voluntary employer co-investment, equipment-sharing partnerships, performance-informed grants and legally compliant Islamic social finance. Any pooled facility requires independent financial oversight, procurement rules, clear eligibility conditions and public reporting of allocations and outcomes. A levy-based scheme should be considered only after impact assessment on micro, small and medium-sized enterprises and legislative review.

An operational funding formula could consider poverty and remoteness, programme cost, equity targets, equipment requirements and independent quality ratings. Outcomes should be monitored without introducing incentives to exclude learners facing disadvantage. Sustainability should be evaluated using actual recurrent-cost coverage, diversity and predictability of financing, infrastructure condition and the cost per satisfactorily assessed learner.

### **5.5. Pillar 4: Solutions Feedback Loop (SFL)**

The SFL proposes a common labour-market intelligence and monitoring cycle that begins with occupational demand mapping and ends with recorded training decisions. Provider registries, employer interviews, tracer surveys, student records, wage information where ethically accessible and skills-forecast exercises would be triangulated. The system should publish disaggregated indicators without disclosing personal data. A designated coordination entity would set information standards and frequency, while regional agencies and providers would contribute data and interpret local demand.

Feedback should trigger explicit decisions: revise a module, update an occupational standard, adjust procurement, improve a work placement, redistribute places or commission additional training. A simple learning cycle should

include evidence collection, deliberation, recorded action, monitoring and reassessment. The SFL must interact with all three other pillars to have practical effect.

**Table 2**

*Proposed institutional functions, outputs and risks of the STTF pillars*

| Pillar | Core institutional function                       | Proposed outputs                                                    | Principal safeguards                                       |
|--------|---------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------|
| CGS    | Coordinate standards, mandates and partnerships   | Governance charter; provider registry; joint priorities             | Legality; representation; conflict management              |
| HSDE   | Deliver employer-informed, inclusive competencies | Modular curricula; assessed workplace learning; instructor training | Quality assurance; equity; practical assessment            |
| SIM    | Finance recurring operations and innovation       | Costed investment plan; grants; transparent pooled funding          | Independent audit; procurement; distributional fairness    |
| SFL    | Link demand data to decisions                     | Tracer data; employer surveys; course-change log                    | Data protection; interoperability; decision accountability |

## 6. An Indicative Five-Phase Implementation and Evaluation Pathway

The author's original five-phase sequence is retained but redefined as an indicative implementation design that requires governmental agreement, assessment of mandates and locally adapted costing. The phases should not be read as chronological proof that the model has already been implemented.

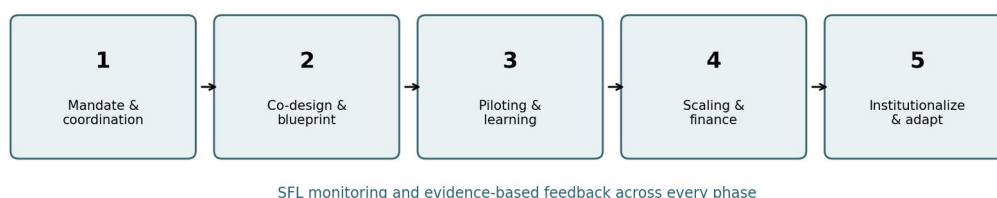


**Figure 2.** Five proposed STTF implementation phases. Feedback and safeguards apply throughout, rather than only at the end.

### 6.1. Phase 1: Inception and mandate establishment

Stakeholders would complete an institutional and regulatory mapping, identify existing councils and accreditation bodies, confirm the responsible lead agencies, and negotiate the mandate of a coordination platform. The initial outputs should include a governance charter, published stakeholder map, risk register and agreed criteria for selecting pilot locations. A baseline assessment should document current provision, training quality, inclusion, programme costs and labour-market information coverage.

### 6.2. Phase 2: Co-creation and detailed design

Cross-sector technical working groups would develop occupational competency standards, equitable admission rules, pilot curricula, instructor support arrangements, a data-governance framework, and costed financing scenarios. Particular attention should be given to productive sectors identified in the NTP—agriculture, livestock, fisheries and other growth activities—while allowing regions to identify locally relevant trades (MoPIED, 2025). The stage-gate for piloting should be an agreed, budgeted and independently reviewed implementation protocol.

### 6.3. Phase 3: Piloting and pressure-testing

A small number of contrasting settings should be selected through transparent criteria rather than convenience alone. One site might have established training infrastructure, while another might test rural access or lower-connectivity conditions. Appropriate pilot indicators would include assessed competency, completion and dropout, gender- and

disability-disaggregated access, employer satisfaction, placement quality, six- and twelve-month employment, cost per trainee and curriculum-response time. Baseline and follow-up procedures should be specified in advance, and an external evaluator should examine feasibility and unintended effects.

#### 6.4. Phase 4: National roll-out and scaling

Scaling should be conditional on predefined performance, safeguarding, financing and administrative benchmarks. A sustainable expansion plan would identify recurrent liabilities, institutional responsibilities, geographical priorities, data infrastructure and mechanisms for recognition of credentials. Successful pilot examples should be adapted to local contexts rather than copied uncritically. Political endorsement alone should not be regarded as evidence of readiness for national expansion.

#### 6.5. Phase 5: Mainstreaming and continuous adaptation

The final phase would integrate approved STTF processes into government planning, licensing, training budgets and institutional accountability mechanisms. Annual reporting would disclose the alignment of training programmes with identified occupational needs, graduate transitions, financing sustainability and inclusion. The SFL should ensure that policy and provision are revised as labour-market conditions, technology and climate risks change.

**Table 3**

*Strategic implementation matrix and illustrative evaluation indicators*

| Phase        | Leading activities                             | Gate/output                            | Illustrative indicators                              |
|--------------|------------------------------------------------|----------------------------------------|------------------------------------------------------|
| 1. Mandate   | Stakeholder mapping; legal review; baseline    | Agreed remit and coordination rules    | Representation; baseline coverage; approved charter  |
| 2. Co-design | Industry panels; curriculum and finance design | Costed pilot blueprint                 | Occupational standards; validated budget; safeguards |
| 3. Pilot     | Delivery trials; tracer follow-up; feedback    | Independent pilot assessment           | Competency mastery; completion; placements; cost     |
| 4. Scale     | Accreditation and financing extension          | Conditional expansion approval         | Qualified providers; recurrent-cost coverage         |
| 5. Embed     | Budget integration; annual learning reviews    | Standing accountability and adaptation | Course updates; employer response; employment trends |

*Note.* Indicators are suggestions to be operationalised with baseline values, numerators, denominators, targets, collection schedules and responsibilities during co-design. They are not observed outcomes.

## 7. Discussion

### 7.1. Integration as the substantive theoretical contribution

The conceptual contribution of RISE is not that governance, delivery, finance or information is novel in isolation. Each is present in existing TVET literature and Somali policy. The contribution is to assert an explicit set of dependencies and an institutional pathway linking them in one coherent design. CGS establishes common rules and direction; SIM enables continuity and accountable resourcing; HSDE converts those resources into assessable competencies; and SFL uses labour-market and learner outcomes to revise all three. Because this model connects decisions to measurable consequences, its claims can be assessed rather than merely endorsed rhetorically.

The interaction addresses a recurrent weakness of project-oriented reforms: an infrastructure programme can improve physical access while creating no lasting finance; skills courses can expand graduation without occupational relevance; and a national standard can remain unenforced when providers lack instructors or equipment. This interpretation is consistent with multi-country scholarship showing the joint importance of industry participation and system capacity (Aryal, 2020; Hussain et al., 2021; Muchira et al., 2023). Yet no causal benefit can be attributed to STTF until implementation studies compare outcomes against credible alternatives.

### 7.2. Relevance to Somalia's development strategy

The NTP and Centennial Vision 2060 establish a relevant normative direction for human-capital development, productive diversification and inclusion (MoPIED, 2025). A demand-driven STTF could align regional training priorities with those goals, but this alignment should be examined sector by sector. For agriculture and livestock, examples include equipment maintenance, irrigation, animal health assistance, logistics and climate-adaptive practices; for fisheries, cold-chain and processing skills; for construction and services, occupational standards, safety and entrepreneurship; and for digital sectors, adaptable technical and foundational skills. These are candidate domains for demand assessment rather than findings of a completed national skills survey.

The model also fits a setting in which private enterprises and non-state organisations perform substantial training and employment functions. Instead of prescribing an exclusive public-provider model, CGS would negotiate common credentials and quality standards for plural provision. Public accountability must coexist with local flexibility: rural and displaced learners may need different training schedules and supports than learners in established urban centres. Stronger inclusion should be assessed through enrolment, retention, competency attainment, placement quality and sustained outcomes—not participation percentages alone.

### **7.3. Comparison with existing programmes and policy instruments**

Somalia's ESSP already calls for broader access, quality improvement and regulation. The GIZ programme descriptions show existing activity on modular curricula, training standards, access and sector coordination (Federal Government of Somalia, 2022; GIZ, n.d.-a, n.d.-b). STTF should not claim to originate these interventions or treat prior initiatives as wholly disconnected. Its proposed added value is a clearer integration logic that makes routine feedback and recurrent financing as central to implementation as curriculum reform. Whether this additional architecture improves coordination is a question for administrative and field assessment.

### **7.4. Potential failure modes and ethical safeguards**

Several failure modes warrant attention. A new steering body may duplicate lawful authority; a pooled fund may concentrate discretion; employer-led programme design may overlook informal work and transferable skills; and tracer databases may generate privacy risks. Nationally uniform rules may impose unmanageable compliance costs on small rural centres, while digital initiatives may widen gaps in connectivity and disability access. These risks call for legal review, representative governance, independent audits, data minimisation, appeal channels, and formative evaluation. Explicitly confronting them improves the policy proposal's plausibility.

### **7.5. Framework validation and future research**

A defensible validation programme should begin with expert review and structured consultations among federal and member-state agencies, employers, instructors, trainees, disability organisations and finance specialists. Participants should assess the clarity, relevance, feasibility, equity and likely unintended consequences of each pillar. A second stage would use a costed proof of concept in selected locations, with a registered evaluation protocol, independent governance monitoring, consistent baseline data and follow-up tracing. Mixed-methods evaluation could compare changes in verified competency attainment, employment transitions, employer satisfaction, provider standards and recurrent financing against pre-specified benchmarks. If policy conditions permit, quasi-experimental comparison sites could strengthen causal inference; otherwise, contribution analysis and realist process evaluation would be more defensible than an unqualified impact claim.

### **7.6. Study limitations**

This manuscript is based on narrative and documentary material rather than a prospectively registered and independently reproducible systematic review. The incomplete source-selection record limits claims about coverage and replicability. Some tables in the original source cannot be authenticated from readily accessible underlying statistical or evaluation records; these are retained as clearly identified supplementary source material, not treated as independently verified evidence. The proposed interdependencies are plausible but untested, and implementation recommendations are not accompanied by countrywide cost or legal feasibility assessments. Therefore, the study does

not demonstrate improved employment, poverty reduction, economic growth or national training effectiveness resulting from STTF.

## 8. Conclusion

Somalia's vocational education challenge is best understood as a coordination and learning problem in addition to one of training access and resources. The RISE framework offers a structured way to relate four essential functions—collaborative governance, flexible and equitable training delivery, sustainable financing, and continuous labour-market feedback—within the proposed Somali TVET Transformation Framework. A five-phase pathway converts the model into a sequence of tasks with observable decision points. The documentary literature supports the relevance of the underlying problems and the general importance of these functions, but it does not establish that this particular configuration will work in practice. STTF should consequently advance as a testable, nationally negotiated reform proposal whose implementation depends on verified baselines, representative participation, legally grounded institutions, costed pilots and independent evaluation.

## 9. Recommendations

First, responsible Somali authorities and recognised stakeholders should commission a legal and institutional mapping to determine how a proposed coordination council would complement, rather than duplicate, existing mandates. Second, the training system should use periodic regional skills assessments and employer co-design to develop competency-based modules in sectors selected through defensible demand evidence. Third, a costed financing plan should prioritise recurrent operating needs and transparent allocation before adopting any new pooled funding structure; the viability of waqf and other voluntary instruments should be explored with relevant legal and financial authorities. Fourth, a proportionate and secure labour-market intelligence system should integrate provider records, employment tracer studies, employer feedback and a documented cycle of curriculum revisions. Finally, a limited, independently evaluated pilot should precede national scaling, with explicit safeguards for women, rural learners, displaced groups and persons with disabilities.

## References

- Al Shuaili, A. S. T. (2025). Bridging the skills gap: Technical and vocational education and training student competencies and labor market alignment in Oman. *Vocation, Technology & Education*, 2(3), Article e19. <https://doi.org/10.54844/vte.2025.0991>
- Alam, M. J., & Sharmin, D. (2023). Skills development for graduate employability in Bangladesh: Japanese language in TVET program. *Journal of Technical Education and Training*, 15(2), 72–91. <https://doi.org/10.30880/jtet.2023.15.02.007>
- Aryal, B. P. (2020). Financing of technical and vocational education and training in Nepal. *Journal of Education and Research*, 10(1), 58–80. <https://doi.org/10.3126/jer.v10i1.31898>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Deutsche Gesellschaft für Internationale Zusammenarbeit. (n.d.-a). Rehabilitation of technical and vocational education and training (TVET) in Somalia [Completed project, No. 2016.2104.4]. [https://projectdata.giz.de/projektdateien/projects.action?pn=201621044&request\\_locale=en\\_GB](https://projectdata.giz.de/projektdateien/projects.action?pn=201621044&request_locale=en_GB)
- Deutsche Gesellschaft für Internationale Zusammenarbeit. (n.d.-b). Rehabilitation of technical and vocational education and training (TVET) in Somalia [Follow-on project, No. 2023.2069.5]. <https://www.giz.de/en/projects/rehabilitation-technical-and-vocational-education-and-training-somalia-tvet>
- Federal Government of Somalia. (2022). Somalia education sector strategic plan 2022–2026. Ministry of Education, Culture and Higher Education. [https://planipolis.iiep.unesco.org/sites/default/files/ressources/somalia\\_essp-2022-2026.pdf](https://planipolis.iiep.unesco.org/sites/default/files/ressources/somalia_essp-2022-2026.pdf)
- Hussain, M. A. M., Zulkifli, R. M., Kamis, A., Threton, M. D., & Omar, K. (2021). Industrial engagement in the technical and vocational training (TVET) system. *International Journal of Learning, Teaching and Educational Research*, 20(12), 19–34. <https://doi.org/10.26803/ijlter.20.12.2>
- Kamaruzaman, F. M., Othman, N. N. J. N., Omar, M., & Zaid, M. F. A. M. (2025). Future generic skills for technical vocational education graduates. *International Journal of Learning, Teaching and Educational Research*, 24(3), 312–332. <https://doi.org/10.26803/ijlter.24.3.15>
- Kamarzaman, N., Ahmad, A. A., & Muda, M. Z. (2024). Leveraging waqf to address financing constraints in technical and vocational education and training (TVET) research and innovation. *International Journal of Academic Research in Progressive Education and Development*, 13(4), 1631–1642. <https://doi.org/10.6007/IJARPED/v13-i4/23285>
- Mack, A. J. (2024). Funding and its impact on the administration and organisational efficiency of technical vocational education and training institutions. *Discover Education*, 3, Article 221. <https://doi.org/10.1007/s44217-024-00305-5>
- Ministry of Planning, Investment and Economic Development. (2025). National transformation plan (NTP) 2025–2029. Federal Government of Somalia. <https://mop.gov.so/national-transformation-plan-ntp-2025-2029-report/>

- Muchira, J. M., Kiroro, F., Mutisya, M., Ochieng, V. O., & Ngware, M. W. (2023). Assessing technical vocational education and training institutions' curriculum in Kenya: What strategies can position the youth for employment? *Journal of Adult and Continuing Education*, 29(2), 563–582. <https://doi.org/10.1177/14779714221145863>
- Nkunya, H. R., & Mwila, P. M. (2024). Bridging the gap between TVET skills and labor market demands: An analysis of the influence of training outcomes in Dar es Salaam, Tanzania. *International Journal of Research and Innovation in Social Science*, 8(12), 703–709. <https://doi.org/10.47772/IJRIS.2024.8120057>
- Onyango, E., & Kelonye, C. (2022). Artificial intelligence (AI) driven interventions in technical and vocational education and training. In *Tenth Pan-Commonwealth Forum on Open Learning* [Conference paper]. <https://doi.org/10.56059/pcf10.1996>
- Otache, I. (2022). Enhancing graduates' employability through polytechnic–industry collaboration. *Industry and Higher Education*, 36(5), 604–614. <https://doi.org/10.1177/09504222211063140>
- Sambili, E., & Ngeno, N. (2022). Education and health for women and youth empowerment [Policy brief]. National Economic Council of Somalia. [https://nec.gov.so/wp-content/uploads/2022/09/P2-Policy-Brief\\_Social-Sector\\_Sambili.pdf](https://nec.gov.so/wp-content/uploads/2022/09/P2-Policy-Brief_Social-Sector_Sambili.pdf)
- Shrestha, R. B. (2021). Initiations of employer engagement in training delivery of TVET programmes. *Journal of Training and Development*, 6(1), 12–20. <https://doi.org/10.3126/jtd.v6i01.41769>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Torraco, R. J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human Resource Development Review*, 4(3), 356–367. <https://doi.org/10.1177/1534484305278283>
- Varma, C., & Malik, S. (2023). Perspective chapter: TVET in the 21st century—A focus on innovative teaching and competency indicators. In *Technical and vocational education and training*. IntechOpen. <https://doi.org/10.5772/intechopen.112516>